

I WILL PRAISE THEE.

FOR I AM FEARFULLY AND WONDERFULLY MADE.



"GOOD UNDERSTANDING GIVETH FAVOR; BUT THE WAY  
OF THE TRANSGRESSORS IS HARD."

PHILOSOPHY OF HEALTH:  
NATURAL PRINCIPLES  
OF  
HEALTH AND CURE:  
OR  
HEALTH AND CURE WITHOUT DRUGS.  
ALSO  
THE MORAL BEARING OF ERRONEOUS APPETITES.

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## PREFACE TO THIRTY-SEVENTH EDITION

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A FORMER treatise on this general subject, of smaller size, was written as an experiment, to prove whether the people in general were willing to be informed on the science of right living; and whether they would appreciate truth in its warfare against their much-loved and destructive appetites and habits. In proof of the success of that experiment, it may suffice to say, that the work has, in six years, passed into THIRTY-SEVEN EDITIONS, and the demand for it still continues. It has, therefore, been thought best to revise and enlarge it, so that it may contain much more instruction upon matters of such vital importance in practical life.

It was originally written, and is now re-written, under the most hearty sympathy with the sufferings of humanity. The recollections of great ill health in early life, have ever called forth and kept alive that sympathy to the present hour. Hence, from the time of entering the medical profession, nearly 30 years since, much attention has been given to the study of facts relating to the laws of life and health, and the destructive nature of various popular appetites and practices which are working ruin to the physical intellectual, and moral welfare of this generation.

These facts, compared and associated with other facts which have been developed by the researches of other men, are here set forth in a plain and simple style, to be adapted to the reading of all classes of people, and the benefit of every one who wishes to be informed upon that which belongs to his highest earthly good.

There is no cause of human suffering so great as the want of intelligence among the people on this subject. There are comparatively few who have even read the first word on this important matter; and therefore few who know any more about the structure and functions of their own bodies, or the natural laws which govern their healthy condition and the prevention of disease, than they know about the inhabitants of the moon. Those who think themselves wise on this subject, without reading, are of all persons the most ignorant of it.

How, without reading, can any one tell how his blood is formed — how it circulates, or by what process his bread becomes his flesh and bones? How can he know wherefore he respires through his lungs and his skin, and how diseases of those organs are engendered? How can he know the seat and circulation of his electric forces in the brain and nerves, which form the bond of union between his soul and body? Let every individual wake up on this matter, and avail himself of Nature's health-insurance policy,— for Nature always goes for health and long life.

THE AUTHOR.

BOSTON, SEPTEMBER, 1854.

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## INTRODUCTION.

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THERE is scarcely any subject so universally neglected as a knowledge of the laws of health and life. All people love to be well, and dread to be sick; yet take little or no pains to economize their health or to ward off disease. They indulge their appetites and inclinations in violation of the laws of health, until they are overtaken with the penalty which the Great Author of our being has affixed to them, in the form of disease; and then know not why or wherefore they are ill, or how to recover.

It may, with propriety, be said, that nineteen cases out of twenty, if not ninety-nine out of a hundred, of the ills which annoy mankind, especially those of a chronic character, might be avoided. We might as well enjoy health, as a general rule, as to be groaning under pains and diseases. Though we might not be able to repel measles, small-pox, scarlet fever, and many other contagious or epidemic diseases, yet nearly all chronic diseases, and a very large proportion of those which are acute, might be prevented; and even those which could not be avoided, — for instance, that fearful malady, the cholera, — by habitual obedience to law, would be made of much milder form.

Very little is known by the people at large on this subject, and what is known is very lightly appreciated.

Scarcely any subject can be presented to the community in which they take so little interest as that which immediately concerns their health, until they are overtaken with disease. Scarcely any subject is more unwelcome than this, especially to those who love their appetites more than health. They create a very large majority of their diseases by ignorance of their own organic laws—inform themselves on every subject but this—treat health as a matter of no account till destroyed—charge their sufferings to Providence, and DRUG THEMSELVES TO DEATH.

These few pages are intended for those who are willing to know what course is best in order to retain, or to regain, a healthy constitution; for those who have more regard for their own ultimate good than for their present gratification; for those who prefer the right way to that which fosters unlawful indulgence.

It is not only a matter of expediency that we obey law in this respect, but a matter of duty. The laws which govern our constitutions are divine: and to their violation there is affixed a penalty, which must sooner or later be met. And it is as truly a sin to violate one of these laws, as it is to violate one of the ten commandments. Many seem to think that they have a right to treat their own bodies as they please; forgetting that God will hold them under obligation to physical as well as moral law, and that every infringement will meet with its legitimate and appropriate reward.

L. B. C.

## PHILOSOPHY OF HEALTH.

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### THE VITAL ORGANS.

UNDER this head, those organs of the body are referred to, which are concerned most intimately in sustaining animal life,—without the action of which, death must inevitably ensue,—organs which form the basis of all beings possessing organic vitality.

### THE NERVOUS SYSTEM.

THE BRAIN is the seat and origin of all the nervous forces. It is made up of bundles of nerves. It is the seat of mental action. Its organic conformation is affected by the action and growth of the different characteristics of mind. Demonstrations in the science of phrenology prove this beyond a doubt. Man, in his original state, was created, doubtless, with a perfect balance in the size and activity of the different phrenological organs. But since the fall a want of proper balance has characterized the whole human race. All the organs of the brain subserve important purposes, while their action is kept within the limits originally intended for them. Even since their first derangement and perversion, they are never so extravagant in their action as to be absolutely ungovernable, so as to destroy the accountability of their possessor.

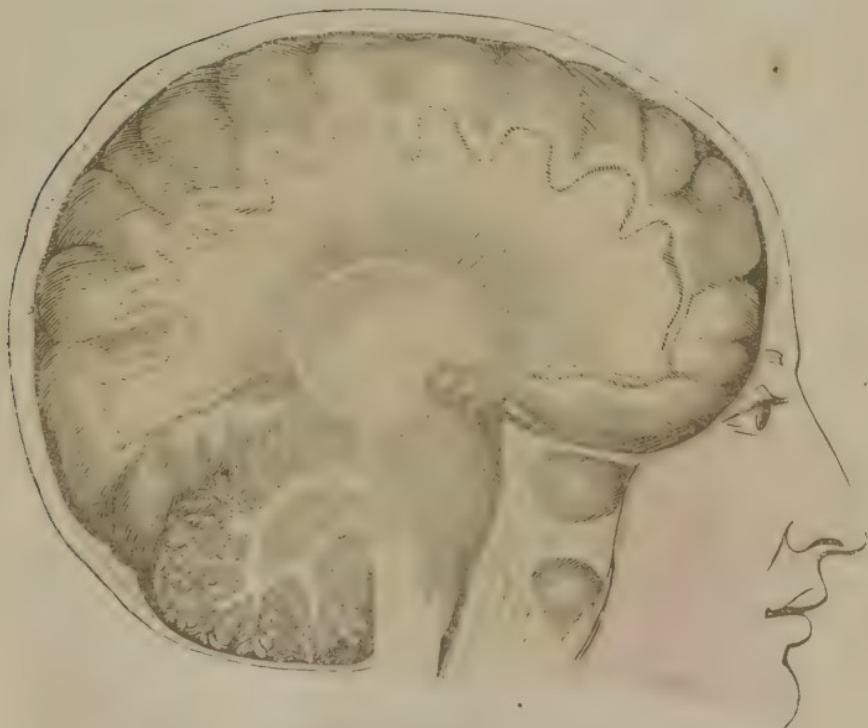
Sometimes those phrenological tendencies are so strong that it requires great firmness and determination to control them. These tendencies are partly congenital, and partly the growth of habit. For the existence of those which are strictly inborn, no one himself is responsible; but for those tendencies which are the result of habit, every one possessing them is answerable. And as there are no inborn tendencies which cannot be governed, and as no one is responsible for their existence, there is no sin in their abstract being; but the sin lies in allowing them any inordinate action. If they are originally extravagant, they can be governed; and if governed, there will be no increase, but rather a decrease, in the proportion of their action. So that, on the whole, it is not the phrenology which gives habitual character, but habitual character which makes phrenology. A man's phrenological character will mainly be the product of his own habits of thinking, feeling, and acting.

Hence the importance of every one's knowing his own phrenological tendencies, and essentially modifying them, by suppressing what is bad, and cultivating what is right. A knowledge of one's own phrenology helps a man to analyze himself. Hence, too, the importance of mothers' having a practical idea of the peculiar phrenological tendencies of each child; that they may know how to apply physical and moral discipline to the best possible advantage to the children under their care; for it is in the power of mothers, in a great degree, to give a correct phrenological char-

PLATE I. NERVOUS SYSTEM.



NO 1. BRAIN: CEREBRAL PORTION.



NO. 2. BRAIN: PERPENDICULAR SECTION.



acter to each child under their tuition. Every mother should have a phrenological chart of each child, and make herself acquainted also with the fundamental principles of physiology, that she may be able to give such a physico-moral discipline to each, as will do honor to herself as a faithful mother, and work out the physical and moral salvation of her child.

THE NERVES, proceeding as they do from the brain, carry out its influences and commands into all the functions of the animal economy. From it go out various branches of nerves, to transmit, like so many telegraphic wires, the electric fluid which is inseparably connected with the vital action of every part of the body. The nerves generally run in pairs from the brain and spinal cord,—the great nerve of the backbone,—to all parts of the body. A pair of nerves are contained in one cord. One of this pair is the medium of sensation, and the other of motive power. The one communicates feeling to and from the brain and all other parts of the body; the other gives the power and the command of motion of every part of the muscular system.

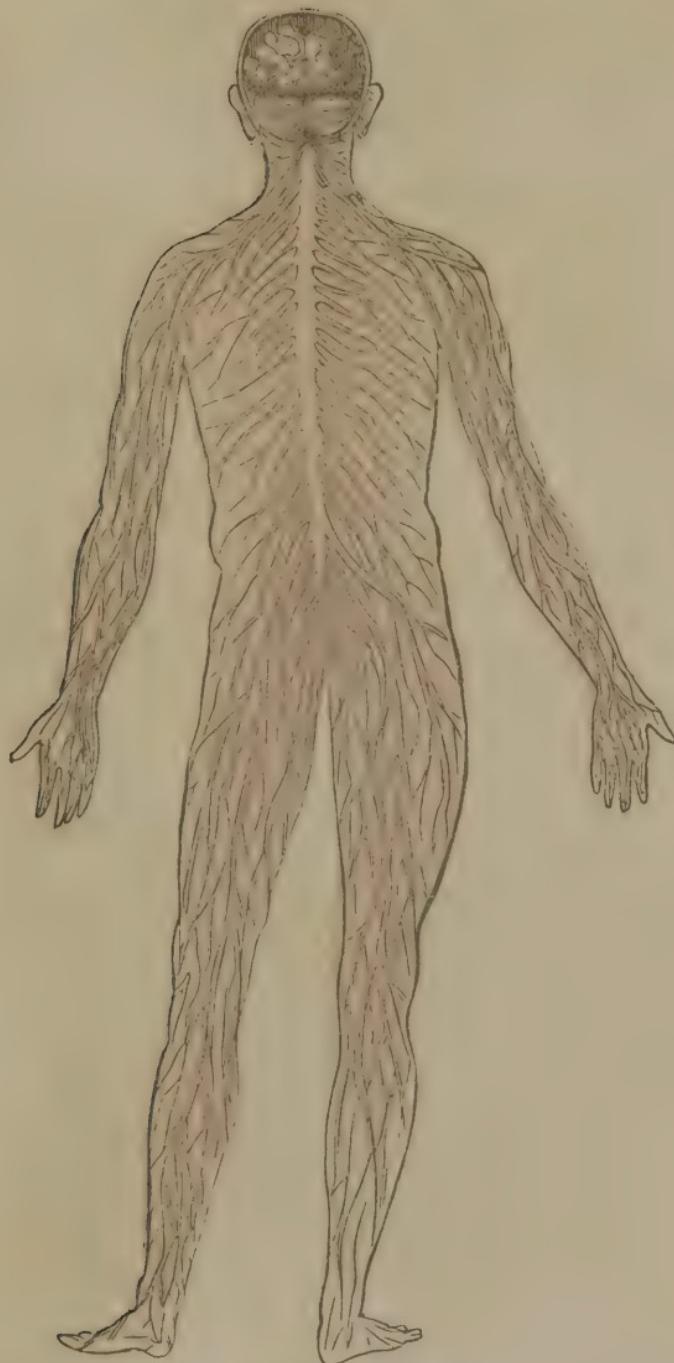
These nerves are, so to speak, the telegraphic wires by which every part of the body, in regard to its sensations and motions, holds intercourse with every other part. They form the medium through which the brain receives intelligence from other parts, and governs and controls all the organs of voluntary motion. If, in the darkness of night, the end of the finger of the extended arm should touch a burning iron, a mes-

sage by sensation would be forthwith sent from the burning end of the finger along the electric line to the brain, the general telegraph office, and immediately a command would be sent back, through the nerve of motion, commanding the removal of the finger. In this way, despatches are continually sent, during the active hours of life, on matters pertaining to motion and sensation, to all parts of the system.

Sometimes the nerves, by some injury, cease to operate,—cease to transmit their electric fluid furnished from the great galvanic battery, the brain,—by which the brain, or the will through the brain, ceases to command and control motion, and by which sensation is destroyed. We sometimes find a limb in what is called a sleep. This condition is caused by cutting off the circulating electricity in its course, by pressure on the nerve of the part. The pressure being removed, the electric fluid flows on, and sensation and power of motion gradually return.

Sensation and voluntary motion are not only dependent on a right electric circulation, but also those functions which involve involuntary action. Digestion in the stomach and the pulsation of the heart are carried on by electric forces. Cut the nerve communicating with the stomach, and digestion ceases; apply an electric battery, and digestion progresses again. The circulation of blood, through the heart and arteries, is doubtless kept up by the attractive and repulsive forces of electric currents. All the forces of nature, in the circulating system, are greatly dependent on

PLATE II. NERVOUS SYSTEM.



THE NERVES IN GENERAL.

(See Appendix, p. 292.)



this electric agency. The wounds of palsied limbs are far slower in healing than of other parts. No vital function can be properly carried on, without a right performance of the electric forces.

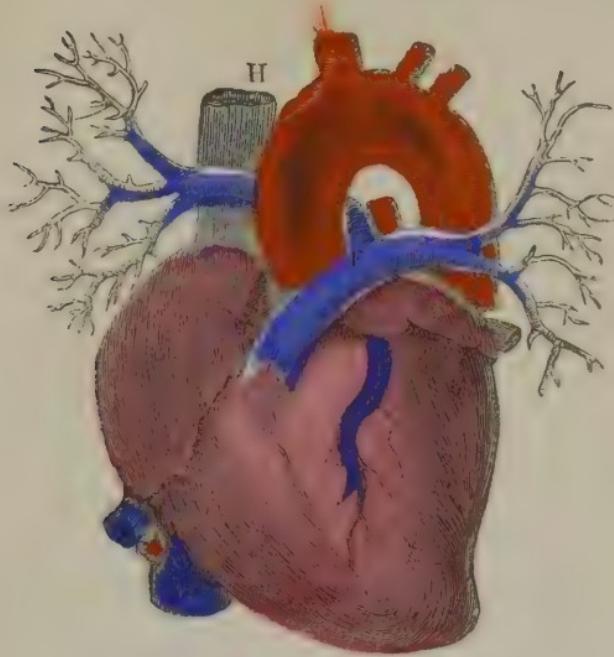
In view of these facts, great pains should be taken, by those who care for health, to preserve the nervous system in a perfectly healthy state. Everything which tends to impair its tone, impairs the tone of the vital forces of every function of the body. And not only are these physical functions injured, but the mental forces also; for the nervous system is the connecting medium — the medium of sympathy between mind and matter. Hence the wretched economy of all stimulants and narcotics on the nerves. The injury done to the electric forces by the use of such agents as the habitual use of tea, coffee, alcohol, opium, and tobacco, and especially the latter, is far greater than is generally supposed. Of all those, alcohol, to the same degree of stimulation, injures the electric circulation the least. The influence of the other articles is more permanent and irretrievable; yet their influences are so deceptive to their lovers, that few have understood their destructive power. Their exhilarating force, felt on taking them, blinds the mind to their reacting influence which must follow. Alcohol burns up the system by its carbon and inflammable gases, so that spontaneous combustion of the whole body sometimes takes place: but the nerves are less permanently disturbed by it, when used to the same extent, than by tea, or coffee, or tobacco.

## THE CIRCULATING SYSTEM.

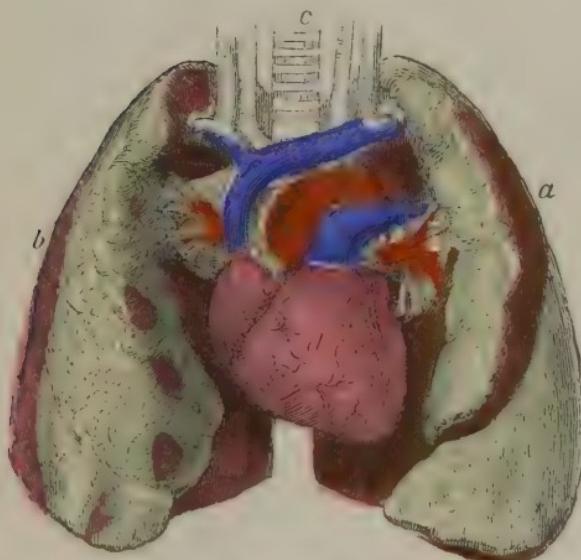
The HEART, ARTERIES, VEINS, and CAPILLARIES, are the principal organs through which the circulation of the blood is carried on. In the circulation of this fluid through these vessels, the heart receives into its right ventricle the blood conveyed to it through the veins. This is called venous blood, and is of a dark color, on account of the amount of carbon contained in it. From the heart it is thrown into vessels contained in the lungs, by which it comes in contact with the air. Here it undergoes a change, and is returned to the left ventricle of the heart. Thence it is carried, by the pulsating forces of the heart and arteries, throughout the whole body. It is first thrown into large arteries, which divide themselves off into smaller ones, till they are reduced to the smallest conceivable ramification of vessels, called capillaries, for the distribution of the blood to every part of the solids of the whole body. This object being accomplished, the remaining matter of the blood is returned by the veins to the heart.

In this way matter is carried to all parts of the system, for the supply of the waste that is constantly going on. In the young there is not only waste of matter to be replaced, but matter is needed for the growth and the perfection of the body. In persons of ripe growth there is matter constantly given off by the surface of the body, the lungs, and the organs of secretion and excretion, which must be replaced with fresh

PLATE III. CIRCULATING SYSTEM.



NO. 1. THE HEART DETACHED.



NO. 2. THE HEART AND LUNGS.

(See Appendix, p. 292.)



matter, or the body would soon perish. In this way there is a constant change going on in the system, by which, once in about seven years, all the matter composing the body shall have been given off, and new matter supplied ; so that now we possess none of the matter which composed our bodies seven years ago. We are identically the same persons, but the matter composing "the house we live in" has been wholly changed.

In view of these facts, a pure and healthy state of the blood is of vast importance. If we create impurities in the blood, they are carried to all parts of the fluids and solids of the whole body, and must, in some way, sooner or later, develop their fruits. Hence the importance of having our food and drinks free from all tendencies toward such impurities ; for the blood is supplied, as will soon be seen, from our food. If we use food adapted to create cancerous, scrofulous, or any other humors, we run the risk of having such humors develop themselves, sooner or later, in some part of the system. It may require a series of years for them to be exhibited, when it may be too late ever to eradicate them from the strong hold they have gained.

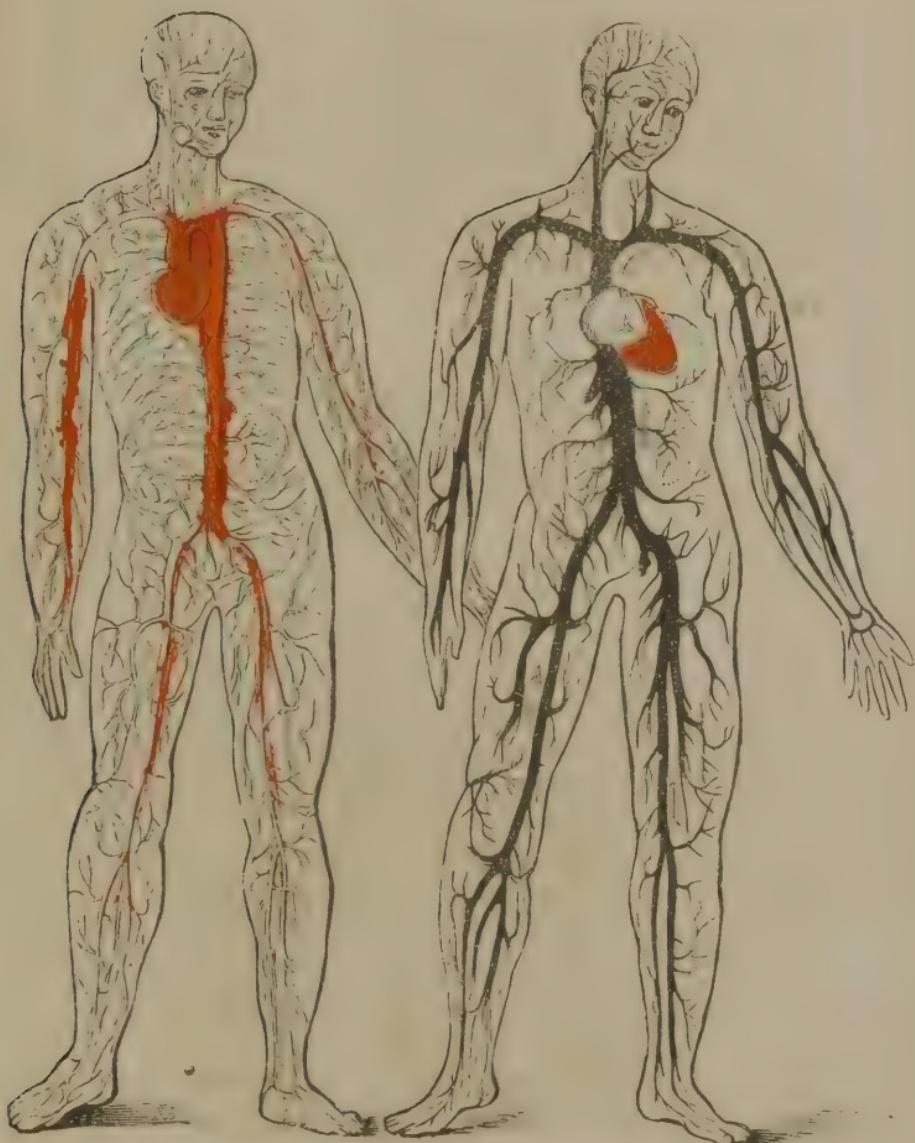
After the blood of the arteries through the capillary vessels has given off its nutritive matter, as described, to every minute portion of the body, which nutritive matter consists in the red globules contained in it, made red by the oxygen with which they are impregnated, it is taken up by the veins which are distributed through all parts of the body, and returned back

to the heart. While on its way to the heart, just before reaching that organ, it is met by the great duct, called the thoracic duct, which conveys into the returning blood the nutritive properties of the food, extracted from it by the digestive organs. With this new supply of nutritious matter, the blood goes to the heart, and then to the lungs, to receive a change by contact with the air, and continues its routine of circulation.

The speed of action in the heart and arteries varies according to age, exertion, and excitement. The number of pulsations per minute, in the unborn child, varies from 135 to 175; after birth, from 100 to 120; in adult persons, from 70 to 75. As age advances, pulsation grows slower. At the age of 60 to 70 years, it becomes reduced to 60, or a pulsation every second. The pulse of females is quicker than that of men. Motion and exertion increase the number of the pulse. Standing up, instead of laying down, increases it. Mental excitement greatly accelerates its motion. Stimulants, which produce a morbid excitement of the nervous system, increase the action of the heart and arteries. A draught of alcohol, a quid of tobacco, or cigar, will increase the pulse. A single cigar, by the fever it excites, will add from 15 to 20 beats per minute. These stimulants produce a diseased action and excitement of the heart and arteries, and thus induce a feverish motion in the pulse.

It is calculated that the blood of an ordinary man will weigh about thirty-five pounds; and that the

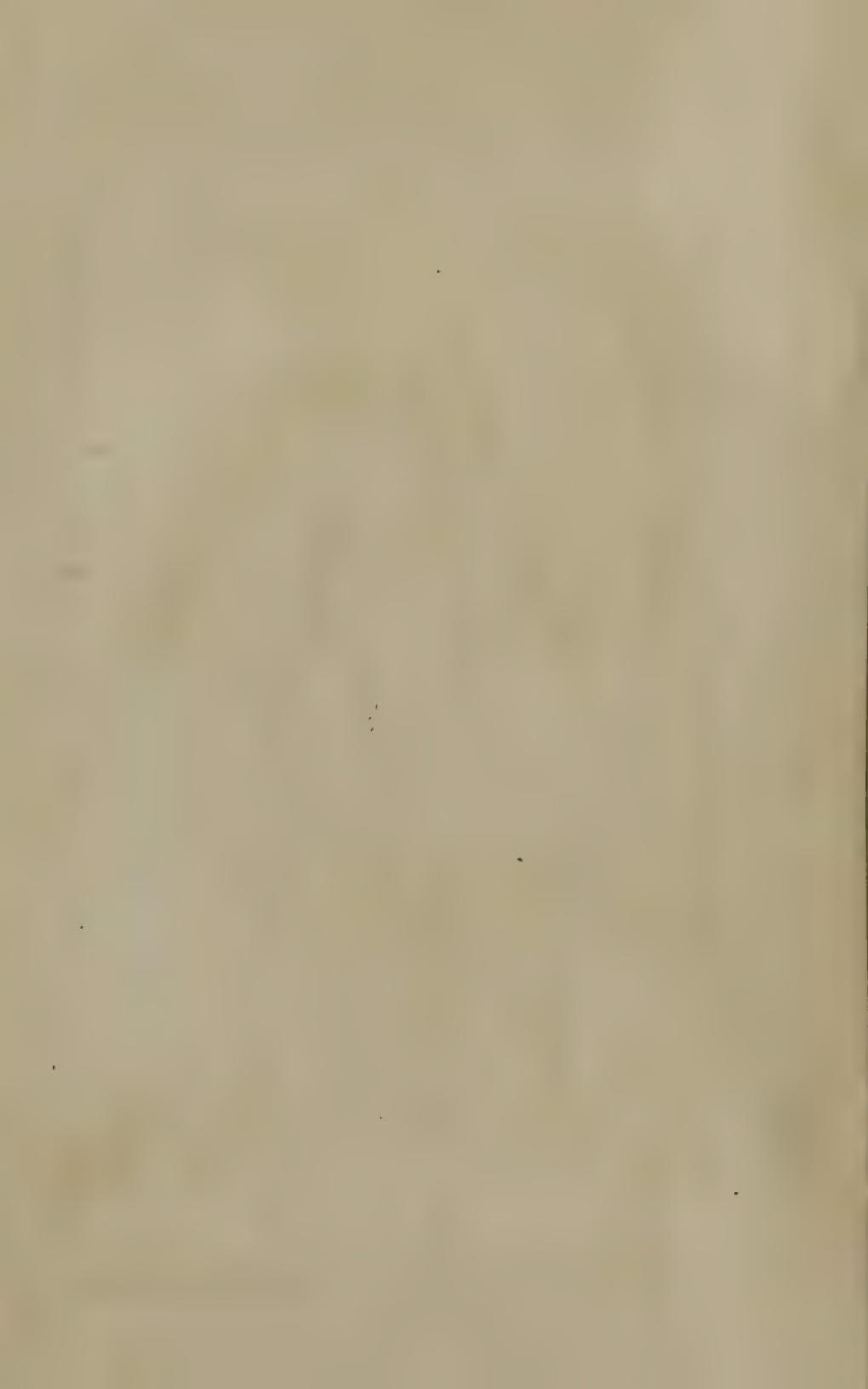
PLATE IV. CIRCULATING SYSTEM.



NO. 1. ARTERIES.

NO. 2. VEINS.

(See Appendix, p. 295.)



whole blood passes through the entire circulation in about two and a half minutes.

## THE RESPIRATORY SYSTEM.

Respiration essentially consists in the interchanging of certain elementary principles contained in the blood, for those contained in atmospheric air. The Lungs, and the Skin, form the medium through which this interchange is made.

THE LUNGS consist of an infinite number of small cells. Connected with these are small tubes, branching out from the bronchial tubes, and these tubes branching from the trachea, or windpipe. At every inspiration of air, these cells become filled. At every expiration of air, these cells are nearly emptied. When air is received into the lungs, the blood sent from the right ventricle of the heart meets it. Here the carbon of the blood is thrown off in the form of carbonic acid gas; while the oxygen of the air taken into the lungs, is taken into the circulation of the blood, and carried to every part of the body. Together with receiving oxygen, electricity is also received and distributed throughout the body.

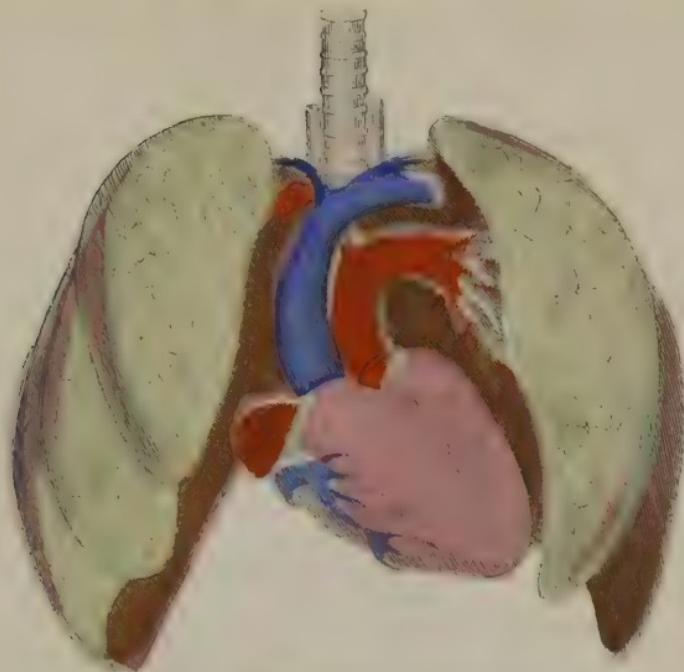
The amount of nourishment derived from food bears a close relation to the amount of oxygen received into the circulation. The oxygen is also essential in giving heat to the body. The carbon of the blood becomes united with the oxygen, the oxygen consuming the carbon and forming carbonic acid gas; therefore the amount of natural heat depends on the amount of oxygen

received into the lungs, and the amount of carbon of our food; by which, uniting with the oxygen of the air, animal heat is at once generated. The amount of air breathed, also, has to do with physical strength. The eagle is an animal of great physical power; it inhales a very large amount of air. The oxygen, essential to nutrition, and the electricity, essential to nervous force, are taken into its lungs in very large proportions.

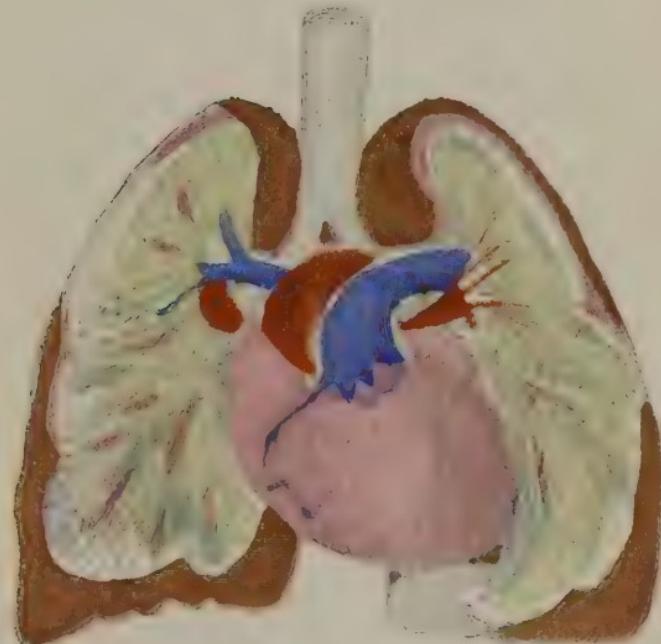
The blood from the veins, conveyed to the lungs, is of dark color, on account of the carbon it contains. Here an excess of carbon is given off in the form of carbonic acid gas, and a corresponding amount of oxygen from the air is taken in. This process of exchanging carbon for oxygen, changes the color of the blood; it gives to it a bright crimson complexion, which it retains till its oxygen is dispersed to the remotest parts of the body; then the blood is taken again, comparatively deoxygenized, into the veins to be returned to the heart and lungs. The blood and air in the lungs meet and exchange their gases through the medium of a thin, delicate membrane, which prevents the blood from entering into the air-cells. When this membrane is ruptured, there is bleeding at the lungs.

It can easily be conceived, from these facts, how important to the welfare of the whole system is the breathing of good air. If the atmosphere which we breathe is impregnated with hurtful gases, their influence is carried through the blood to every part of the

PLATE V. RESPIRATORY SYSTEM.



NO. 1. LUNGS—THEIR TWO LOBES.



NO. 2. LUNGS AND HEART.



body. If we are shut up in a close room, especially for the night, where the occasional opening of the door cannot be depended on for relief, we use up all the vital properties of the air in the room, consume all the oxygen, and give off carbonic acid gas; so that it becomes very offensive to one just entering the room, and very unhealthy to breathe over and over by the individual occupying it. We cannot be too careful to have a free circulation of air in our sleeping apartment. Every school-room should have a ventilator at the top of the room, where the bad air which rises can pass off, and give room for a fresh supply.

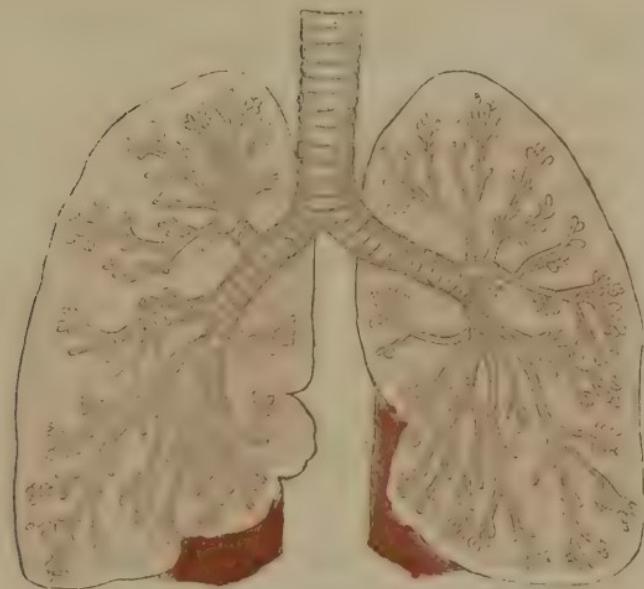
If we are compelled to breathe air that is hurtful, it weakens the lungs, exposes them to disease engendered in their own cavities, or to disease carried to them from abroad. Many cases of bleeding at the lungs and of consumption have been induced by protracted causes of this kind. Whenever we find a sleeping-room whose effluvia is unpleasant, we may know that its occupant is subjecting not only his lungs, but his whole system, to influences that are destructive to health, and ultimately to life itself. No air is fit to be breathed that has parted with its due proportion of oxygen, or is unduly charged with carbonic acid gas. Unless the air to be breathed retains its natural equilibrium of elements, it is unfit for the healthy purposes of respiration.

Consumption of the lungs has several different causes. One consists of those things which directly prostrate the vital forces: such as bad air, already

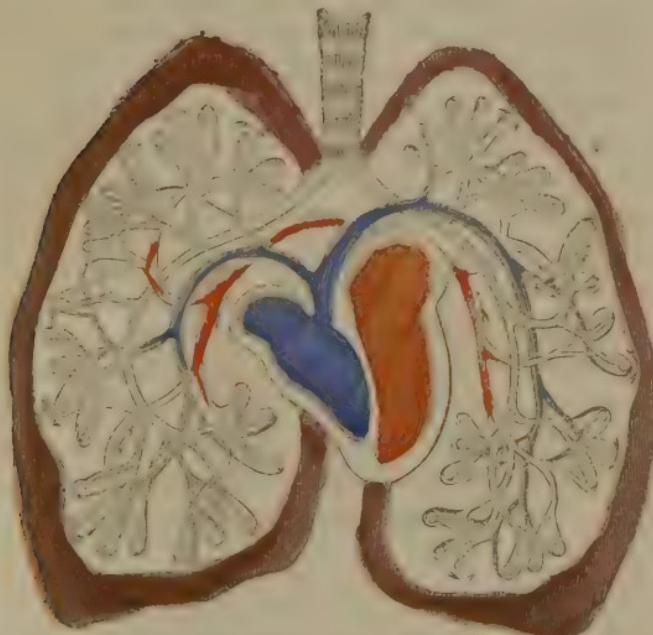
described, and air vitiated by poisonous vapors, which directly enervate the texture of the lungs. Tobacco-smoke is one of those poisonous vapors, which not only weaken and irritate the air-cells of the lungs, but, meeting the blood as it comes up to receive its oxygen, sends its narcotic essence throughout the whole course of the blood-vessels. Anything, indeed, whether received into the system through the lungs, or in any other way, which weakens the powers of life, predisposes to consumption, as well as other forms of disease. A large proportion of consumptions arise from severe and protracted cases of dyspepsia. Sometimes foreign substances, dust and other hurtful matters, obtain access to the lungs, and irritate and inflame them. Vast damage has also, in past times, been done by pressing the lungs out of their place, and oppressing their expansion by lacing; on which subject it is not now necessary to enlarge.

THE SKIN is also an organ of respiration. As the arterial blood flows out through the arteries into the capillary vessels, which unite the arteries and veins, it then gives off a portion of its elements to the atmosphere. It gives off a portion of carbon in carbonic acid gas, and receives a portion of oxygen from the surrounding air. It also transmits electrical influences which communicate between the body and the atmosphere. The healthful condition and action of the skin is greatly essential to health. Bad air will have its influence. Miasmatic influences take advantage of the fact that the skin holds, in a great degree,

PLATE VI. RESPIRATORY SYSTEM.



NO. 1. AIR CELLS OF THE LUNGS.



NO. 2. AIR-CELLS AND BLOOD-VESSELS.

- (See Appendix, p. 296.)



the destiny of the body. If the action of the skin be retarded by having its pores and capillaries obstructed, there will at once be disturbance throughout the whole system.

There is great sympathy between the skin and the internal organs. When the functions of the skin are deranged, there is disturbance in the action of the kidneys, which secrete from arterial blood elements which are not further needed. It also influences the liver, whose office is, the secreting and carrying off of matter collected from the blood circulating in the veins. The lungs, too, hold a close sympathy with the action of the skin. The whole system feels, when the skin suffers. Hence the importance to be attached to keeping the pores unclogged, by suitable washing, and unembarrassed by wrong sleeping arrangements. There should be needful bathing, but not excessive : the pores kept open, but not stimulated beyond their due action : and entire abstinence from the false and hurtful luxury of feather beds.

## THE DIGESTIVE SYSTEM.

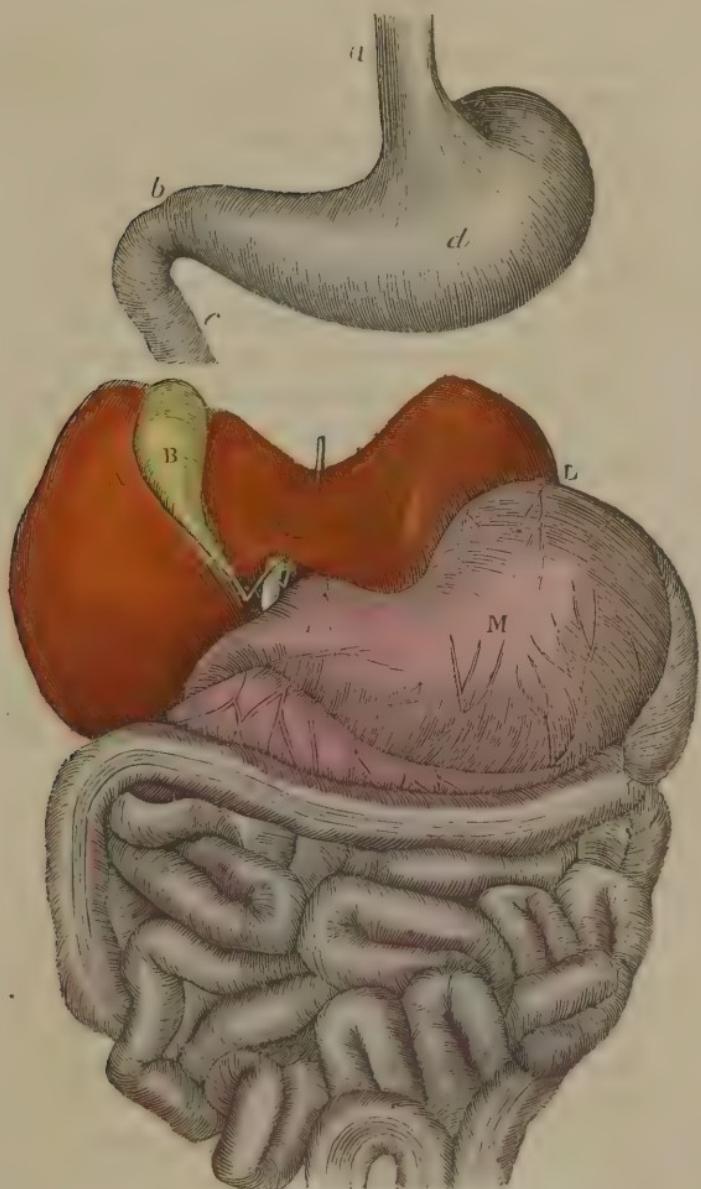
There is no part of the human system which has such controlling influence over the whole body, as respects health or disease, as the Digestive Organs. Any derangement in these, especially the stomach, calls up a sympathy of action from the whole animal economy. Nearly all the morbid actions found in the general system are produced from causes first operating on the stomach. Hence, keeping the digestive

system in a healthy state secures, as a general rule, a healthy action in every other part of the physical organization. Therefore, to know something of the anatomy and physiology of the digestive organs, together with the laws of digestion, seems indispensable for every individual who would know how to take care of his health.

By the term digestive organs, are meant the Mouth, Stomach, Liver, and Bowels, including the whole alimentary canal, commencing with the mouth and terminating with the extremity of the bowels. Extending through the whole length of this canal is a lining membrane, called mucous membrane, continuous throughout, from the lips to the opposite extremity. This membrane is filled, throughout its whole distance, with minute blood-vessels, and in some parts abundantly supplied with fine filaments of nerves.

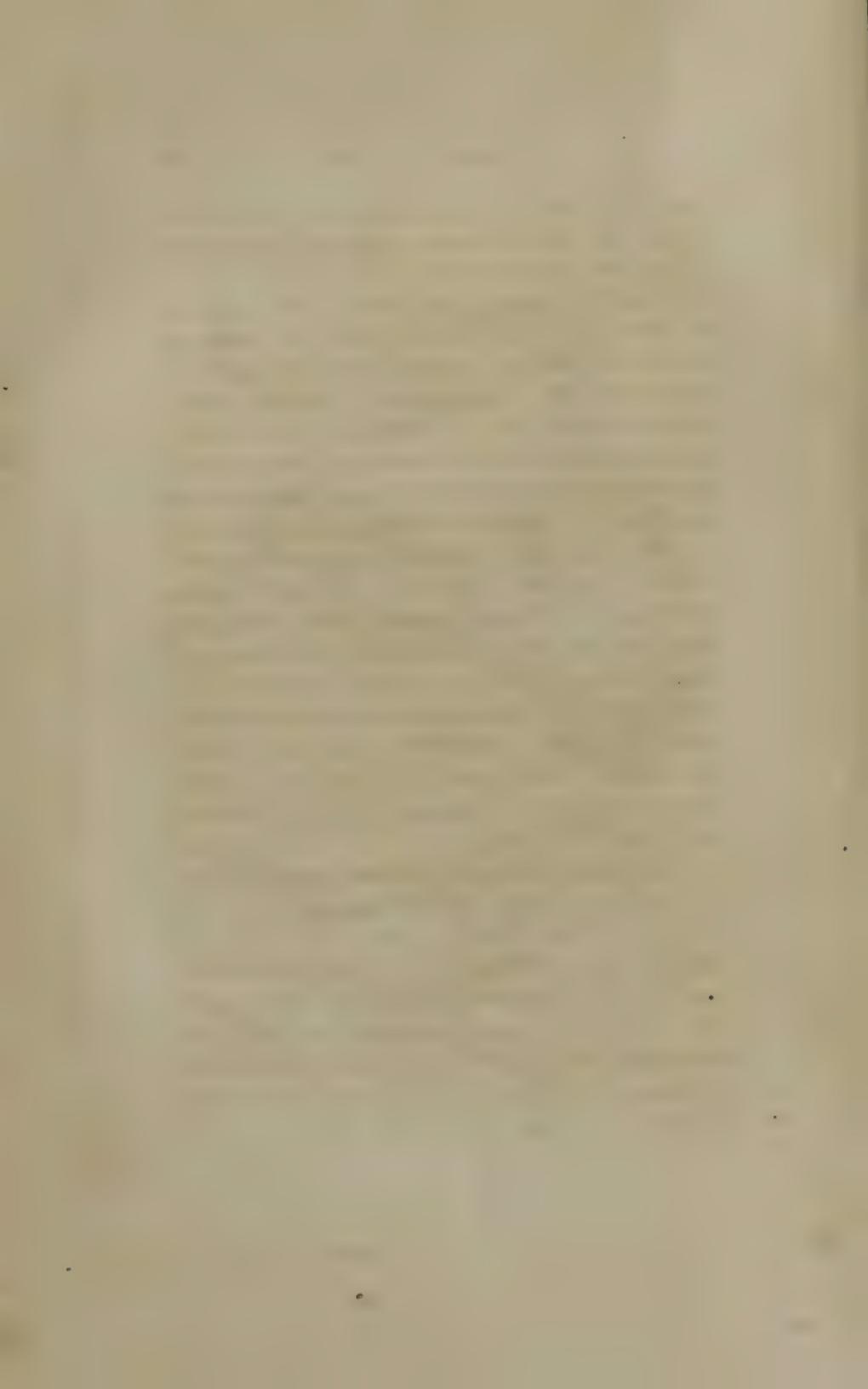
THE MOUTH, with its teeth and glands, commences the digestive process. The teeth are to masticate the food. The salivary glands give important aid, too, in digestion. There are three pairs of glands which pour the fluid which they secrete into the mouth. This fluid is called saliva. The effort of chewing excites these glands, and promotes the secretion of saliva, which is essential to the healthy ingestive process. It is this fluid which is so lavishly secreted and cast away by tobacco-chewers. That which Nature requires for the welfare of the digestive process is wantonly and foolishly thrown away. The object for which the Creator made these glands, is perverted.

PLATE VII. DIGESTIVE SYSTEM.



STOMACH, LIVER, AND BOWELS.

(See Appendix, p. 297.)



They are overtaxed in the amount they are made to secrete ; and this constant over-draft, of itself, tends to lessen the vigor of the system.

The saliva is formed from the blood ; and an excessive flow of it gradually diminishes the necessary quantity of this vital fluid. This being thrown off, the digestive organs are deprived of their due quantity to sustain properly the divine economy of animal life. Hence, sometimes tobacco-chewers have found that, on swallowing its juices, they have made themselves in better condition than when spitting it off. Although by this process they get more of the narcotic poison of tobacco, yet the saving of that important fluid, the saliva, has more than compensated them. How much better that men who profess to be above brutes, put away a habit so low and unnatural that brutes will not descend to it ; and cease to pervert this order and law of Nature, on which ultimate health and the natural duration of life depend !

THE STOMACH is the most important organ of digestion. It has three coats : that which has most to do with digestion is the mucous coat, which lines it. This coat is supposed to furnish by its glands what is called gastric juice, which is the principal agent of digestion in the stomach. This organ is abundantly supplied with nerves, and holds a very powerful sway over the whole nervous system ; so that, when the stomach is under the influence of disease, either acute or chronic, the whole system is immediately in a state

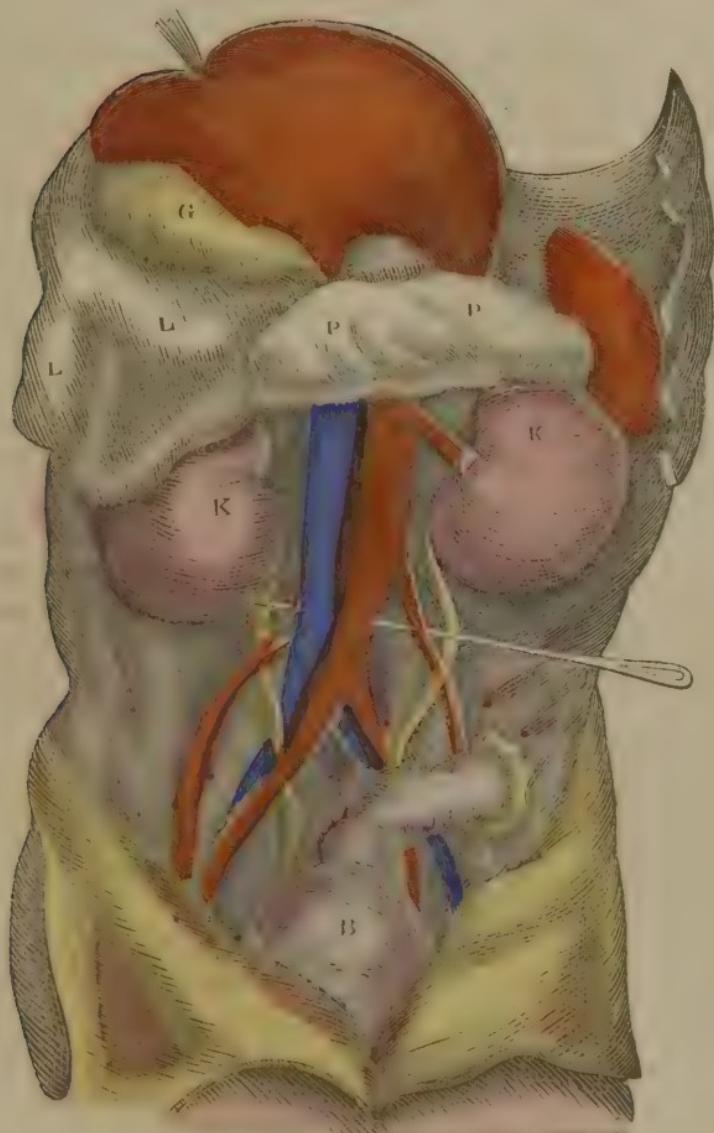
of suffering. To secure, then, a healthy system, the stomach must be kept in health.

THE LIVER has to do with digestion. This organ furnishes the bile. It is the largest gland in the body. Its office seems to be, to gather from and carry out of the system, substances which, if retained, would prove hurtful. When the liver is inactive, we have what is called jaundice; the liver failing to take up from the system that substance which forms the bile. When this is the case, a yellow substance is found diffused throughout the entire system; the white of the eyes, and sometimes the surface of the whole body, exhibit a yellow tinge.

The bile, when properly secreted and discharged, meets the contents of the stomach as discharged into that part of the bowels nearest the stomach, and is there supposed to assist in the process of separating the nutritious part of that contents from the refuse which is to pass off by the bowels; but its more important office, doubtless, is to aid the passage of the refuse, or the feces, by evacuation. The bile seems to be nature's appropriate stimulus to the bowels, without which, costiveness and other irregularities are likely to ensue.

THE BOWELS contain the absorbent vessels, called lacteals, which take up the nutritious part of food, and carry it into the circulation of the blood for the support of the system. They consist of small tubes distributed along the course of the bowels, especially the small intestines, whose mouths suck up the chyle, conveying

PLATE VIII. DIGESTIVE SYSTEM.



SPLEEN PANCREAS, AND BLADDER.

(See Appendix, p. 297.)



it into the thoracic duct, and thence into the venous blood, before it reaches the heart. The bowels then convey the refuse part of the food out of the body.

The whole length of the intestines is from six to eight times that of the whole body. The mucous membrane which lines them, as before stated, is continuous from the mouth to their extremity; and such is the sympathy of one part with another, that an injury to that portion which lines the mouth and stomach may manifest itself upon its other extremity. Tobacco, by its poisonous power in the mouth, has sometimes produced the most inveterate piles.

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### THE DIGESTIVE PROCESS.

#### MASTICATION OF FOOD.

MASTICATION, or chewing, is the first step in the process of digestion. When food is taken, it should be thoroughly masticated before it is suffered to pass into the stomach. Without chewing, the food is too coarse and gross for the stomach, and is unprepared for the action of the gastric juice. Besides this, the action of chewing causes the food to be mixed with the saliva, which is an important item in the preparation of it for the action of the throat in swallowing. The food should therefore be finely broken up, and thoroughly moistened with saliva. In order to accomplish this art, it is highly necessary that food should be taken with sufficient moderation to give time for

the process of mastication, and the discharge of saliva from the glands of the mouth. Eating fast, or even talking while chewing, besides its incongruity with politeness and good breeding, is directly at war with thorough mastication.

Many persons seem to think that hurrying their meals to save time, is economy; their business drives them, and they drive their time of meals into the smallest possible compass. This is miserable economy; for when they hurry down their food, half chewed and half moistened with saliva, it deranges the process of digestion throughout; and, as a consequence, the food not only sets bad on the stomach, and in time causes dyspepsia, but it fails to accomplish the sole object of taking it — the nourishment of the body. In order to derive nourishment from food, it must be well digested; hence it must be well masticated. When, therefore, we hurry our eating, we hasten our steps on the wrong road. Time curtailed in eating, is worse than hiring money at three per cent. a month. If we cannot spare time to eat, we had better not eat at all. This idea cannot be too deeply impressed; thousands, by this kind of careless, reckless eating, have found themselves the victims of dyspepsia and all its attendant train of evils. The digestive organs may bear the abuse a while without giving many signs of trouble; but the penalty of that broken law must, sooner or later, come; and it may come in the form of a broken constitution.

## FORMATION OF CHYME.

Chymification, or the transformation of food into chyme, is the next important step in the process of digestion. The food, after mastication, passes into the stomach ; here it is formed into a homogeneous mass, partly fluid and partly solid, which is called chyme. What is the exact philosophy of this process, has been a matter of some discussion, into which it is not necessary now to enter ; nor is it yet satisfactorily settled, so as to admit of any definite instruction being given.

The theory which is now generally received, respecting the manner in which the stomach acts upon food is, that the gastric juice possesses a solvent power, by which the food becomes reduced to a uniform mass. The solvent power of the gastric juice is very great in healthy, vigorous stomachs, but varies in strength according to the energy of that organ.

The solvent power of the gastric juice is evidently controlled by the vital principle, or principle of life. While the gastric juice of a healthy stomach acts vigorously upon the hardest kind of food, yet sometimes, when it comes into contact with anything possessed of the principle of life, its power is stayed. Worms, while living, are not affected by it, but, when destroyed, are often digested.

The gastric juice possesses the property also of coagulating liquid albuminous substances. The stomach of the calf is used for this purpose by the dairy-women, in making cheese. When the infant throws up its

milk because the stomach is too full, that milk will be more or less curdled; and, instead of considering this curdling an indication of disease, it should be considered a symptom of a healthy stomach.

The time ordinarily occupied in the process of chymification, when food has been properly masticated, is on an average about three and a quarter hours. The first hour of this period is occupied in the process of intermixing the food, after it enters the stomach, with the gastric juice. After this is accomplished, an alternation of contraction and expansion of the stomach, or a kind of revolving motion, takes place, and continues till the whole mass is converted into chyme, and is conveyed to the first intestine, the duodenum, or second stomach, to undergo another change.

#### FORMATION OF CHYLE.

Chylification, or the formation of chyle, is the next great step in the process of digestion. This takes place in the duodenum. The chyme from the stomach is let into this intestine little by little. A valve at the lower opening or outlet of the stomach prevents it from passing any faster than it can be disposed of in the formation of chyle. This fluid is a thin, milky liquid, extracted from the chyme, and then taken up by absorbent vessels, called lacteals, and carried to the blood. This requires about an hour and a half.

The chyle passes slowly through the duodenum, and in doing so becomes mixed with another fluid furnished from the pancreas or sweet-bread, and the bile from

the liver. Passing thus slowly through this large intestine, ample time is given for the lacteals to take up all that is valuable, to be carried into the circulation for the nourishment and support of the system. This chyle, taken up by the lacteals, is directly converted into blood; and in many of its characteristics it very closely resembles blood. The process by which this conversion is carried on is called absorption. That class of absorbent vessels called lacteals are not only found in the lower part of the first intestine, the duodenum, but are distributed freely along the small intestines, and considerably along the large intestines, for the purpose, as before stated, of conducting the chyle in its appropriate course for the formation of blood.

## EVACUATION OF BOWELS.

Evacuation, or the discharge of the refuse part of food through the bowels, is another, and the last step in the process of digestion. This part of the subject has a very important bearing upon the condition of health. It is impossible for any one to enjoy good health while this office of the bowels is imperfectly performed.

If the bowels are relaxed and irritable, the food is borne along too soon and too rapidly: this causes the process of chylification to be imperfect; the chyle is imperfectly formed, and the lacteals have not sufficient time to absorb it from the mass. This prevents the food from nourishing the system. Hence, those who

suffer from chronic diarrhoea may eat largely, and yet grow weaker and weaker; their food does not nourish them; the nutritious part of it passes off through the bowels, instead of being taken into the blood.

If the bowels, on the other hand, are constipated, the consequences are no less unhappy. No one can possibly be well with costive bowels. The free and easy action of the bowels is as truly essential to health, as the free circulation of the blood. When the bowels are sluggish, the process of absorption of the chyle is retarded, and what chyle is absorbed is less pure and healthy; so the quality of the blood is impaired.

Besides the evils already mentioned, a costive state of bowels often causes a pressure of blood on the brain; also derangement of the nervous system — excitability of the nerves, nervous headache, depression of spirits, and a long catalogue of sufferings, too numerous for detail. Habitual costiveness impairs the tone of the stomach, and prevents its healthy action. Piles, also, with various degrees of severity, are often caused, directly or indirectly, by constipated bowels.

The causes of costiveness are various; and to point them out in detail would be, perhaps, a fruitless toil. But there is one cause, and a very common one, which claims attention here, — it is the habit of inattention to and neglect of the natural promptings of the bowels to evacuate themselves. Thousands on thousands, especially females, by a habit of checking the natural inclinations of the bowels to throw off their contents, have brought upon themselves an habitual costiveness,

which, in time, has cost them immense suffering and wretchedness.

No one should ever hold his bowels in check, if it be possible to avoid it. It can be readily perceived, that doing this would tend to diminish the natural effort of the bowels, and to collect their contents into a solid mass. Then the exertion required to empty the bowels, or the physic taken to aid and make effectual that exertion, tends also to increase the difficulty.

A habit of costiveness should always be removed, if possible; and the best way of doing this is by a course of discipline. Those articles of food should be selected which have an influence to keep the bowels open. Bread made of flour has a tendency to constipate them. But brown bread, and bread made of wheat meal, have a tendency to open them; also molasses taken with food has an additional tendency. Fruits and greens, if the stomach can bear them, are adapted to relieve costiveness.

The influence of the mind should also be brought to bear upon this difficulty. The operation of the mind on the physical system is always great, especially in chronic complaints. A person with costive bowels should have a mental determination to have a natural evacuation of the bowels at some regular hour in the morning; just after breakfast should be preferred. By a mental calculation — by bearing the subject in mind — by thinking and desiring — by electrifying the bowels into action by the force of thought — by intending to have them move about that hour, —

very much may be done by way of facilitating such a result.

But if, instead of attending to a favorable diet, and of thinking on the subject at the proper time, we treat the difficulty with medicines alone, we do harm rather than good; for the more alteratives we take, the more is the trouble increased. The physic only overcomes the constipation for the time, and afterwards leaves the bowels in a more torpid state. Still, rather than endure the consequences of costiveness, it is better to take alteratives, in conjunction with other means, until the difficulty can be overcome. When alteratives are used in conjunction with discipline, they should be of the mildest kind. No proper pains should be spared in overcoming this derangement of nature, till a habitual and voluntary movement of the bowels, once in twenty-four hours, is secured.

In this account of the digestive system, we see how our food is converted into blood for the nutrition of the body. The food is to be masticated in the mouth, formed into chyme in the stomach, separated into chyle in the duodenum, taken up by the lacteals, and conveyed to the veins. Then passing through the lungs, and receiving oxygen from the air, which gives to it its crimson color, it becomes prepared to nourish every part of the body, by supplying it with matter for its growth, or to meet its waste. The purpose of eating should be to accomplish this object. And we should confine ourselves to the eating and drinking of those things which answer this end. That the digestive

organs may never be burdened with articles which cannot be converted into blood; and that the blood may never be littered with foreign substances, which can never be assimilated into flesh. The essences of tea, and coffee, and alcohol, and tobacco, can never be converted into blood, or assimilated into flesh; but they are taken into the blood as foreign substances, in their unconverted state; so that they not only produce a morbid excitability of the nervous system, but adulterate all the fluids of the whole body, and even show their effects in the complexion.

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## DIETETIC LAWS.

### TIME TAKEN FOR EATING.

TIME for eating has claims for attention. If persons intend to have health, their meals should be regularly timed and distanced. There is much importance to be attached to the kind of food which we allow ourselves to take; but the time of taking it, together with the proper intervals between meals, has a much more important bearing on our health. Therefore, as just stated, meals should be regularly divided and distanced. A good common rule, for the time of meals for the laboring classes, is, breakfast at seven o'clock, dinner at one, and supper at seven. But, at different seasons of the year, and with different classes and occupations in society, the time of meals must vary.

But, whatever hours may be selected as most con-

venient for meals, they should be uniform ; and for this reason : at the hour when the stomach is accustomed to receive food, the appetite is generally sharper, and the gastric juices more copious, than they are immediately before or after that time. If food be taken before the accustomed hour, the stomach is, as it were, taken by surprise, and is not found in perfect readiness to receive it ; if the meal is delayed beyond the accustomed time, common experience teaches that the appetite is liable to lose its sharpness,—there is, for a while, less inclination to take food. The objection, however, against delaying a meal beyond the usual time, is very small compared with the objections against eating too soon ; because, when a meal or luncheon is taken soon after a previous one, the stomach has not had sufficient time to go through with the digestive process, and to recruit its energies for another effort. But when a meal is delayed longer than usual, though the appetite may lose its sharpness for a short time, yet it will return again ; and the digestive power of the stomach will not have been impaired, unless the period of abstinence should be of long continuance.

In the arrangement of regular meals, regard should be had to the hour of rest at night. Ten o'clock as will hereafter be considered, is a favorable hour for retirement ; and no food should be previously taken, in all ordinary cases, within the space of two or three hours. If food be taken too near the time of sleep, so as to leave no chance for the more active parts of the digestive process to be performed, there will be found

generally a dull, heavy pain in the head on the following morning, with diminished appetite. The food has laid comparatively undigested through the night, because, when we sleep, the whole system is in a quiescent state; the nerves which are called into action in the process of digestion are, during healthy sleep, inactive. A late supper generally occasions deranged and disturbed sleep; there is an effort on the part of the nerves to be quiet, while the burdened stomach makes an effort to call them into action; and between these two contending efforts, there is disturbance — a sort of gastric riot — during the whole night. This disturbance has sometimes terminated in a fit of apoplexy, and in death.

## TIME TAKEN FOR DIGESTING.

Time for digesting what is eaten demands of every one who values health a most serious consideration. Ignorance on this topic, and inattention to its importance even when understood, have involved thousands and millions in untold suffering and premature death. If it were possible so to impress the mind of community on this subject that they would obey nature's laws, — the laws which the Great Author of nature has given to our digestive systems, — we should see a very obvious change taking place in the standard of general health. The larger portion of people have no rules for eating, but to eat, as they say, "when they are hungry;" having no regard to the time of eating, or to time for digesting; but, like the short-

fed beasts, take a little here and there, whenever and wherever they can get it. They think their own stomachs are a sufficient guide, in spite of facts and philosophy. Therefore, they eat whenever they feel inclined.

Their stomachs would, perhaps, guide them in the right way, if a morbid action of that organ had never been induced by previous irregularities and indulgences. But when irregularities have deranged natural appetite, and placed in its stead a morbid one, then appetite is no longer a safe guide. In any propensity of the body, there is a wide difference between the demands of healthy nature and morbid nature. Yielding to any demand from the latter, is wrong in principle, and bad in economy. This is not only true in relation to eating and drinking, but in regard to any other propensities of the body.

Three meals a day are sufficient for all classes of persons, under all circumstances, and of all ages. For persons having weak stomachs, and many persons of sedentary habits, two meals a day, rightly distanced, might be preferable. But no individual, whatever may be his age, his occupation, or his health, should take solid food more than three times in one day. No person can do more than this without transgressing nature's laws. The reasons for this rule will soon be given.

An argument against taking food at regular intervals is often attempted from the fact that many dumb animals have no regular times of eating; and it is

urged that these animals have no other guide than the dictates of nature. In answer to this, it may be said, that the habits of dumb beasts, since the introduction of sin into the world, under the weight of which "the whole creation," or, rather, as the original signifies, **EVERY CREATURE**, "groaneth, being burdened," are not always in exact accordance with nature's rules. For instance, cattle are put into a lean pasture, and they are unable to gather a full meal at once; they are obliged, perhaps, to graze all day long to obtain sufficient subsistence. In such cases, to allow intervals between meals, would be to undergo gradual starvation. But put dumb animals into full feed, and what do they do? They deliberately eat a full meal, and then cease eating till that meal is fully digested. Hence, the testimony taken from this source, when we make a fair test, is unequivocally and uniformly in favor of eating at intervals sufficient for digestion.

Eating at intervals sufficiently long to allow the full digestion of a meal before another is taken, is as truly essential to the good constitution and health of beasts, as of human beings. The time was, even within the limits of fifteen or twenty years, when it was customary, on driving a horse on the road, to feed him about every ten miles. This was enough to kill the poor animal; he had no time to digest his food, and derive nourishment from it; and it is well that such a system has been abandoned; and it would be better still, if intelligent beings would adopt a sim-

ilar rule of diet for themselves, and those under their care. Those who drive horses for pleasure-riding or in teaming, at this day, having proved the folly of the old system, feed regularly three times a day.

Under this rule, the animals eat, on the whole, less in quantity, are found in better order, and endure much more: and why? because they derive, by obedience to natural law, more nourishment from the same food, and do not break down the digestive organs by oppressing them with too oft-repeated meals. But when individuals live as they list, and eat when they please, in disregard of right rules of diet, they commit a crime against nature. They sin against God, by treating with contempt his laws; they sin against their own bodies, by committing gradual suicide; and the penalty of those violated laws must be met — there is no escape; the punishment will, in some way, sooner or later come; Nature will, without a single failure, take this matter in hand, and sustain the validity of her own laws.

Now for the whys and wherefores of these directions. In the first place, food must be thoroughly masticated. This requires some length of time; especially at dinner, which is, generally and properly, the principal meal for the day. Inattention to and curtailment of time necessary for mastication, is a violation of physical law at the very outset of the digestive process; and one which, more or less, deranges all the other steps. In the second place, when food is lodged in the stomach, it requires pro-

narily about three hours and a half before the entire meal is prepared for and carried into the duodenum, or second stomach. Here are, then, at least three hours and a half generally required for the process thus far. Then about one hour and a half is needed for forming the chyle, and for its absorption.

Therefore, no two meals or luncheons should be allowed to come nearer to each other than a distance of at least FIVE HOURS ; because, as any one can see, there is a regular routine of steps, in the process of digestion, to be gone through with in this space of five hours. And if a second meal or lunch be taken short of that period, it produces confusion ; the process with the first meal is interrupted ; the organs are obliged to stop their course, and begin a new process with the second meal ; there will be probably a struggle between the two processes, and both be imperfectly performed. By this course, the organs are weakened, and the amount of nutrition, from the same quantity and quality of food, is much less.

To illustrate this method of proceeding and its effects, suppose an omnibus, running between Boston and Cambridge, should set out from Brattle-street with passengers, and, after passing half of the distance, the driver should recollect that there were several other passengers whom he had forgotten ; and, instead of finishing his present route, and taking those left behind at the next regular trip, he wheels about, brings his load back, takes in the rest, and again proceeds. Precisely analogous to this, is the

course which multitudes take in respect to their eating; one meal is half digested, and another is crowded upon it. The organs are kept continually at work, without systematic order, and without chance to rest and recruit their energies.

The good effects of regular and simple diet may be seen by visiting our prisons. There the inmates are generally in possession of good health, notwithstanding their confinement and close air. Some have gone there greatly afflicted with dyspepsia, but have obtained a complete cure, and become robust; and this at the time there must unavoidably have been a great and constant mental oppression. This is incontrovertible testimony in favor of plain and regular living.

Besides the positive injury done to the digestive organs themselves, by eating too often, and a sympathetic injury to the whole system, there is a sort of negative injury done to the entire system by the interruption of the process of nutrition. After breakfast has been taken, let a lunch be eaten about eleven o'clock, and the process of forming chyle is injured by the digestive energies being attracted too soon to the work of disposing of the eleven o'clock lunch; and so on in the same manner, so long as meals and lunches succeed each other without giving at least five hours space for digestion. Hence, the system receives less nourishment from about twice the quantity of food per day, than it would receive under a regular, systematic diet, with a regular quantity.

It is argued by some, as just stated, that the inclin-

ation to eat is a proper guide to the time and frequency of eating. But if we eat ten times a day habitually, the stomach is obliged to undergo such a change in its action, that we shall think we are hungry as many times. There comes up a disordered action of the stomach, and a morbid appetite ensues. What sort of a guide is a man's inclination to eat, who is just emerging from the prostrating power of a typhus fever? And why is it that those who are always eating are always hungry, while those who live on three meals a day are not inclined to eat till the regular meal-time comes?

But why contend against facts established by the researches of learned physiologists? They have given us the time required for digestion; we know that, this being correctly ascertained, we cannot interrupt that process without detriment. And who is willing to sacrifice justice to himself, and to the Author of his being, for the paltry gratification of a moment? Thousands do it; but it seems too uncharitable to suppose they would do it with their eyes open, though it is to be feared too many are willingly blind.

Whoever knows no law but the fearful dictates of wrong appetites, is like a ship, driven by fierce winds coastward, without anchor. If we would do right -- if we would act upon principle -- we must obey every righteous law. That is a safe and prosperous government where obedience to law is sustained; that is a well regulated physical system whose physical law is obeyed. But how sadly this law is trampled under

foot! How many there are who reverse one of the best rules of life! While all should EAT TO LIVE, they, impiously and wantonly, LIVE TO EAT. In this way, they destroy the very foundation of all true enjoyment from temporal sources, and prejudice the prospect for the future life. The old heathen adage, "Let us eat and drink, for to-morrow we die," is the sum and substance of their theology; they know no God but their belly.

#### TIME TAKEN FOR EXERCISE.

Time for exercise has an important connection with digestion, and is indispensable to health. It is important to the healthy state of body and mind. Bodily health cannot be secured without due attention to exercise. Persons of sedentary habits, especially, should give particular attention to this subject. Persons of active or laborious habits can make their business subserve the purpose of exercise, while those whose daily task requires little physical exertion need some other exercise. By such, let this part of the subject be particularly heeded. To illustrate what is meant, take the case of the shoemaker. His business chains him to the bench; it gives him insufficient bodily exercise; he is too much confined.

The shoemaker, then, or the man of similar occupation, should endeavor to have a garden to cultivate, if in the country, because this is one of the very best kinds of employment for exercise; it affords physical motion and exertion; it gives amusement to the mind, and it secures healthful influences from the earth.

If this means cannot be secured, then resort should be had to cutting wood, or some other useful exertion ; if this cannot be obtained, then he must resort to some artificial exercise ; at all events, some kind of brisk and smart exercise should be had early in the morning, before breakfast. This gives activity and energy to the body, greatly invigorates the appetite, and exhilarates the mind. This rule applies to all sedentary habits.

Merchant-men and counting-room clerks should accustom themselves to considerable daily exercise of body, in order to preserve a balance of muscular and nervous energy. A great tax is laid on this class of men for the expenditure of nervous forces. To preserve these, the muscular energies must be kept awake by some timely means. Each secular day should have its portion of time for this purpose. A short space each day might save many a broken constitution or premature age.

Persons devoted to the mental labor of study and writing claim a share of attention. Their principal physical exercise should be taken on an empty stomach, i. e., just preceding a meal. Just after a meal, they should be at leisure, or amusement which requires no mental or physical exertion, for at least one hour. Then they are prepared for close study until near the time of the next meal ; leaving a little space for relaxation ; as also, when bodily exercise precedes a meal, a few minutes' relaxation before eating should be had, that the nerves may regain their equilibrium.

But when exercise is spoken of in relation to this class, that which would agitate or exhaust the body is not meant. Such exercise would be decidedly detrimental. If they would give time for eating and for digesting, they could perform a large amount of mental labor with far less time devoted to mere exercise, and that exercise of a milder character, than would otherwise be required. But every one should accustom himself to some brisk, lively, cheerful daily exercise, if he values his health. The same rule applies with equal force to all, whatever may be their calling, whose labors are of a mental character. Under these rules, three hours of close study would be worth more than six in the ordinary way.

If students and professional men would preserve health, they must keep an equable balance between the physical and mental systems. This cannot be done without a portion of time devoted to some systematic physical discipline. That discipline should consist of something which not only gives exercise to the body, but amusement and exhilaration to the fatigued mind. If this can be gained by the use of mechanical skill which can give a small income, it will add to the pecuniary resources of those whose means are limited. But if the only practicable means of muscular exercise and mental exhilaration must consist of something that is of no pecuniary advantage, it is still of vast importance; for, though it can furnish no money, it will secure that which can nowhere be bought with money. A ten-pin alley, aside from its bad moral odor, is one

of the best modes of exercise. The gymnasium furnishes the very best plan, doubtless, on the whole, for giving bodily vigor. Both of these call into labor the muscles of the arms; chest, and abdomen.

## TIME TAKEN FOR LABOR.

Severe exertion of body or mind, immediately after a full meal, should be avoided. No man should put himself to the severe exertion of mowing grass, pitching hay, planing boards, or severe exercise of muscular system of any kind, for about an hour after eating; and especially after dinner, which is generally the largest meal. Every man can generally avoid it, if he choose. "Where there is a will, there is a way," is a vulgar, but a true proverb in such a case. The daily business of some men is not of a kind to require such exertion as would need to be suspended on this account; but where it is, this law must be observed, or damage will finally be felt. A man will sooner wear himself into old age and the grave, for neglect of this natural law. The same rule applies equally to mental labor. No man should put himself to close study immediately after a full meal, neither to close counting-room labor, or teaching, or public speaking. In the latter, there is not only too great mental, but also physical exertion.

Now for a reason for this rule; let the dinner be taken for an illustration: why should we rest from much exertion after taking our dinner? And this rule applies with equal force to all classes of persons and

all kinds of business, which require severe muscular or mental exertion. The reason is this: while the food is being mixed with and broken up by the gastric juice, which process generally occupies, in the case of a dinner, full one hour, the nervous energies — electric forces — of the whole system are drawn into sympathy with the stomach, and made tributary to this part of the digestive process: their aid is needed: this is a law which the Author of Nature has established, and it should be obeyed; i. e., nothing should be allowed to interrupt this natural arrangement. But, if we allow ourselves to make much bodily or mental exertion during the hour mentioned, we distract this arrangement; because, when bodily exertion is made, the nervous energies are required and drawn in that direction, in aid of the muscular forces; or, if the mind is made to labor, then the nervous energies are called in that direction. Hence, when body or mind is taxed considerably immediately after eating, the process of digestion is much disturbed and interrupted.

Everybody's experience corroborates the truthfulness of this theory. We know that after a full meal, especially a dinner, there is a disinclination to much bodily action or mental effort; so strong is the draft upon the nervous energy, or nervous fluid, or animal electricity, whichever it may be called, that it is with difficulty we can call it in any other direction. Therefore, to make much exertion of body or mind immediately after a meal, is to violate a law of the animal economy. To attempt hard work, or study, within

one hour after eating, will induce in any one, except the most vigorous system, with a cast-iron stomach, derangement in the functions of the digestive organs; the food will not digest so well, and the system will not be as well nourished from the same quantity of food. Hence, the whole system is impaired, its vigor and durability are diminished, and life is shortened.

It is in vain that we contend that nature has no rules — the Maker of these bodies no laws — violated law no penalty. It is worse than idle to say, Here are A, B, and C,—they have lived to a great age—have been robust, and have never observed these rules. The general rule is one thing, and the exceptions are another. These instances appear to be the exceptions to a general rule. But are they really and in all respects exceptions? Because some who have kept their bodies and souls in a gradual steeping of alcoholic liquor, have been apparently robust, and have lived to old age, is it proved that alcohol has never done them injury? But, while one has lived a long life in violation of law with seeming impunity, a hundred and one, especially of those who have followed sedentary habits, literary men in particular, have gradually ruined their constitutions.

Whoever has intelligence enough to know that nature has laws, is in duty bound to obey them, and not run the hazard of laying temptations for disease. And whoever will take the safe side of this matter, will always find it for his good. Even the farmer, in the most driving season of the year, will find obedience to

law to be for his interest. Let him conform — and his men with him — to the old maxim, "after dinner sit a while," even one hour,—or, what might be better, instead of sitting idle, let all hands do some light matter, such as arranging and preparing tools,—and he will find, in the long run, more work accomplished, with less expenditure of strength.

Let them work lightly for an hour,—just as they would treat a valuable horse after a full meal,—and then closely task their energies until the time of another meal. This light exercise, immediately after eating, if it be something artificial, i. e., got up simply for exercise, should not only be light, so as not to require real muscular exertion, but it should be something that is adapted to amuse and exhilarate the mind. The state of the mind has much to do with the health of the body, and especially the healthy and free action of the digestive organs. Hence, it is exceedingly important, in all efforts at exercise, that the mind be interested in whatever the hands undertake. Anything that is a piece of drudgery to the imagination, would be of little service to the body.

The fact that the nervous energies are attracted in the direction of the digestive process immediately after a meal, which renders any considerable physical or mental exertion at that time particularly burdensome, is proved true in the conduct of dumb animals. When the ox or the horse has grazed a full meal, he immediately becomes indisposed for exertion or activity. And the same rule should be observed, in regard to his

labor, that has been recommended for human beings, he should never be forced into hard labor short of one hour after he has eaten his meal. The ferocious caitiffs, when they have taken a full meal, lose for a time their fierceness, and are comparatively harmless. And so it is with men: if it be necessary to ask a favor of a morose or tigerish man, seek an interview immediately after dinner; if a charity is to be solicited from a creature who carries a miser's soul within his encasement of flesh, see him immediately after dinner. At any other time than after a full meal, he would resist, and succeed, probably, in warding off every motive; but while the nervous energies are taxed with the digestive effort, he cannot rouse himself so well to meet the emergency. He will rather grant the favor asked, than annoy himself with the effort necessary to repel the invader.

If a laborer commence hard work immediately after eating, the action of his nervous energies is distracted; partly drawn toward the stomach, and partly forced in the direction of the muscular system. By this unnatural forced action of the nerves, the digestive process is impaired; the food is not thoroughly broken up by and mixed with, the gastric juice. By this unlawful operation, the food is comparatively unprepared for all the rest of the process. The chyme and chyle must be imperfectly formed, and the system, so far as each such meal is concerned, imperfectly nourished. Besides this, the forcing of the muscles to exertion against the natural inclination of the nerves to supply

the necessary power, gradually impairs the power and activity of the muscular system.

The man who disregards this law will grow old faster — other things being equal — than the man who allows time for the thorough digestion of his food. It is his food which sustains him in labor; therefore, he is in duty bound to give that food the best possible opportunity to give him support. The same law prevails in dumb animals as in man. Whoever works his oxen or drives his horses immediately after their eating, will find, in the course of an experience sufficient to test the point, that his beasts, under such a management, will soon wear out; while his neighbor's beast, under a treatment which accords with nature's law, will be robust and endure. It is economy, then, as well as health, to yield obedience to this natural law.

Mental labor should never be attempted within one hour after a meal is finished. If a close mental application be made immediately after eating, whether it be a merchant casting accounts, or a student getting his lesson, the digestive process is impaired; the nervous energies are drawn, in a measure, away from the direction of the stomach to the brain. This unnatural action frequently causes an increased quantity of blood to be lodged on that organ, occasioning a dull, heavy headache. Sometimes it will bring on a nervous headache. The influence of this course is also very injurious to the stomach. Hundreds and thousands of students and professional men have in this way brought upon themselves dyspepsia, with its long train of untold symptoms and sufferings.

Many a one has in this way broken irremediably his constitution. With too little physical exercise at the right time, and with mental labor at the wrong time, he has ruined himself for life, or brought himself to a premature grave. Many a one has gone through a regular course of education,—prepared his mind for usefulness,—but, by having neglected the laws of his body,—neglected to keep up a proper balance of action between his physical and intellectual powers,—he has rendered himself disqualified for much execution in the callings of life. His mind, though well disciplined, cannot act in this life without a body; the bodily energies are so deranged and weakened as to hold the intellectual faculties in a state of comparative imbecility.

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## FOOD AND DRINKS.

### THE QUALITY OF FOOD.

ALL our nutrition comes primarily from the vegetable kingdom. If we eat flesh, the nourishment which made that flesh came from vegetables. The nutrition from the corn on which the hog is fattened becomes assimilated into his flesh; and, by eating that pork, we get the nutrition of the corn, animalized, after passing through, and having been incorporated into, his system; or, if we eat pork that has been fattened on dead animal matter, we get our vegetable nutrition after its having passed through two processes of assimilation. But it is proposed to speak here of taking vegetable nutrition in its original state.

This was unquestionably the original method adopted by the Creator for the nourishment of man. Man, in his original, holy state, was provided for from the vegetables of that happy garden which was given him to prune. The Creator gave to Adam charge of the garden, filled with fruits "good for food," which he was to dress, saying, "To you it shall be for meat." This was the Creator's original plan; one animal was not to devour another animal for food. The eating of flesh was suffered, as one of the consequences of the fall.

It is generally admitted, however, that no animal food was used till after the flood; and its permission then may be put down with other things allowed and provided for by law, "because of the hardness of men's hearts," some of which were abrogated and repealed by the Saviour. Swine's flesh—that worst of all flesh for eating—was even then prohibited. While it is not my object, however, to insist on entire abstinence from meats, it is due to show to Americans, who are eating more flesh than any other civilized nation, the English as a body not excepted, that the proportion of their meats to their breadstuffs is enormous and detrimental. Living on the bread-stuffs, and other productions of the vegetable kingdom, is undoubtedly the most natural and healthy method of subsistence for man.

There never was probably an erroneous notion of such universal prevalence as the idea that muscular strength and endurance depend on animal diet. Science and facts are both at war with this error. What

is it which makes blood and flesh, and gives permanent force to muscular fibre? It is the nutritive properties of food. The breadstuffs contain a much larger proportion of nutritive matter than the meats. More and better blood can be made of the grains, than of the same quantity of animal food. In other words, the elements of nutrition essentially forming the chemical ingredients of the blood, out of which all the solids of the body are made, are contained more largely in the breadstuffs than in flesh. These elements are Fibrine, Albumen, and Caseine.

These elementary principles, found largely in the gluten of wheat, are indispensable to the maintenance of life—the supply of material through the blood for the formation of muscular fibre, and the constant waste of organized substance. When this supply is cut off, the body begins to waste, and finally dies. But there is no intelligent chemist or physiologist who will deny that, where the breadstuffs form the principal food, without the use of flesh, the system is as thoroughly furnished with material for its supply of organized substance, as when meats are used. Articles embracing these elements are called AZOTIZED substances, because they contain azote—an element essential to the formation of muscular fibre.

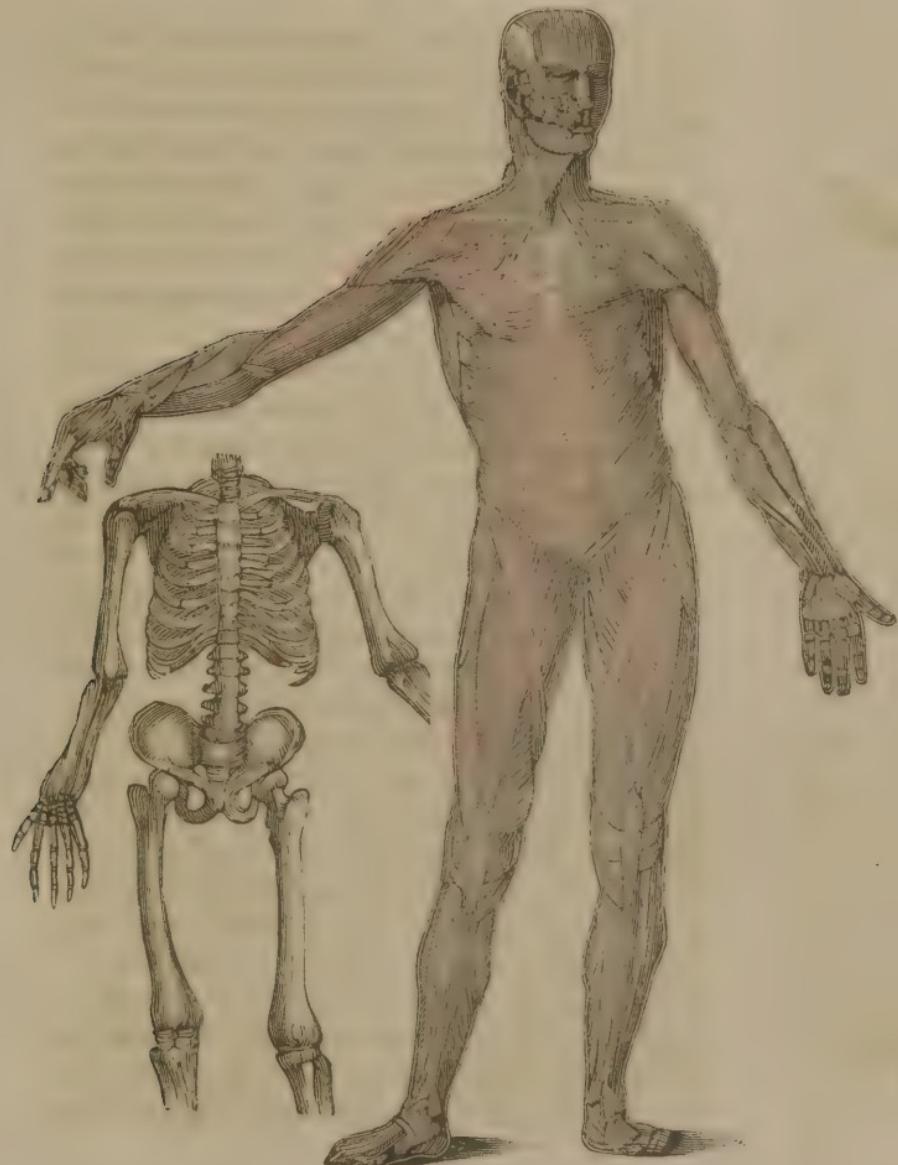
There are other elements essential to the vital process of respiration, which, though they have nothing directly to do with the formation of muscular fibre, are nevertheless indispensable to the maintenance of life. Articles containing these elements are called

NON-AZOTIZED substances. The principal ingredient in these is carbon. The union of carbon and oxygen, by respiration and the consequent chemical changes which occur generates the heat by which the body is kept in an equable temperature in all kinds of weather and climate. The carbon is burned, as it were, by the oxygen, and heat is evolved. Where there is a deficiency of one or the other of these two, there consequently is a diminution of healthy animal heat.

Here we meet another popular error in regard to the indispensable necessity of animal food, viz., that, without meats, sufficient animal heat cannot be maintained for cold weather. This, however, is a kind of faithless theory in the mind of those who advocate it; for they eat the same quantity of meat in the hottest weather that they are accustomed to use in the very coldest; and at the south they use meats, especially the fat of pork, altogether more largely than at the north. But what is the scientific basis of this conclusion? It has none. The carbon, which is essential to the production of animal heat, is contained more largely in the breadstuff than in the meats. The wheat and other breadstuffs contain not only gluten, the basis of animal fibre, but starch, containing carbon, the basis of animal heat. Hence, bread may, with scientific exactness, be called "the staff of life."

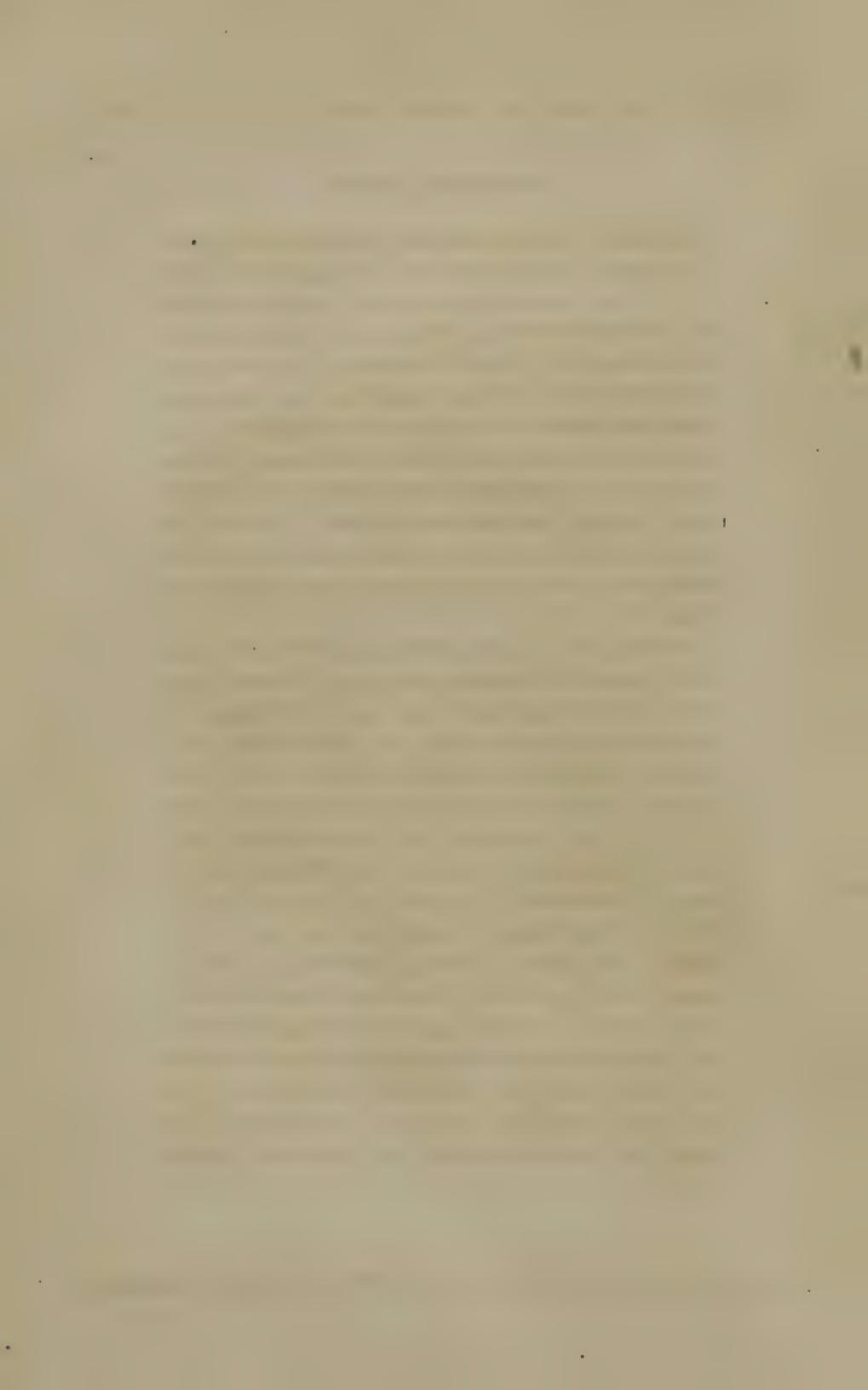
A much larger proportion of carbon is contained in starch than in flesh. According to Dr. Carpenter, an English physiologist, four pounds of starch contain as much carbon as fifteen pounds of flesh. How, then, is

PLATE IX. MUSCULAR SYSTEM.



FRONT SECTION OF MUSCLES.

(See Appendix, p. 298.)



the eating of flesh to favor the generation of heat more than bread? Here this notion meets an overthrow at once. An inhabitant of the frigid zone may live on oil, and tallow, and fat, which largely contain carbon, and dispose of it, if to no advantage more than that from the carbon of bread, yet without the damage he would experience from its use in a temperate or hot climate. But that the carbon of bread could not sustain him in Greenland, remains to be proved. Science says he could be sustained on bread. Facts, too, so far as tested, are stubborn things, both in regard to the influence of bread on muscular fibre and on animal heat.

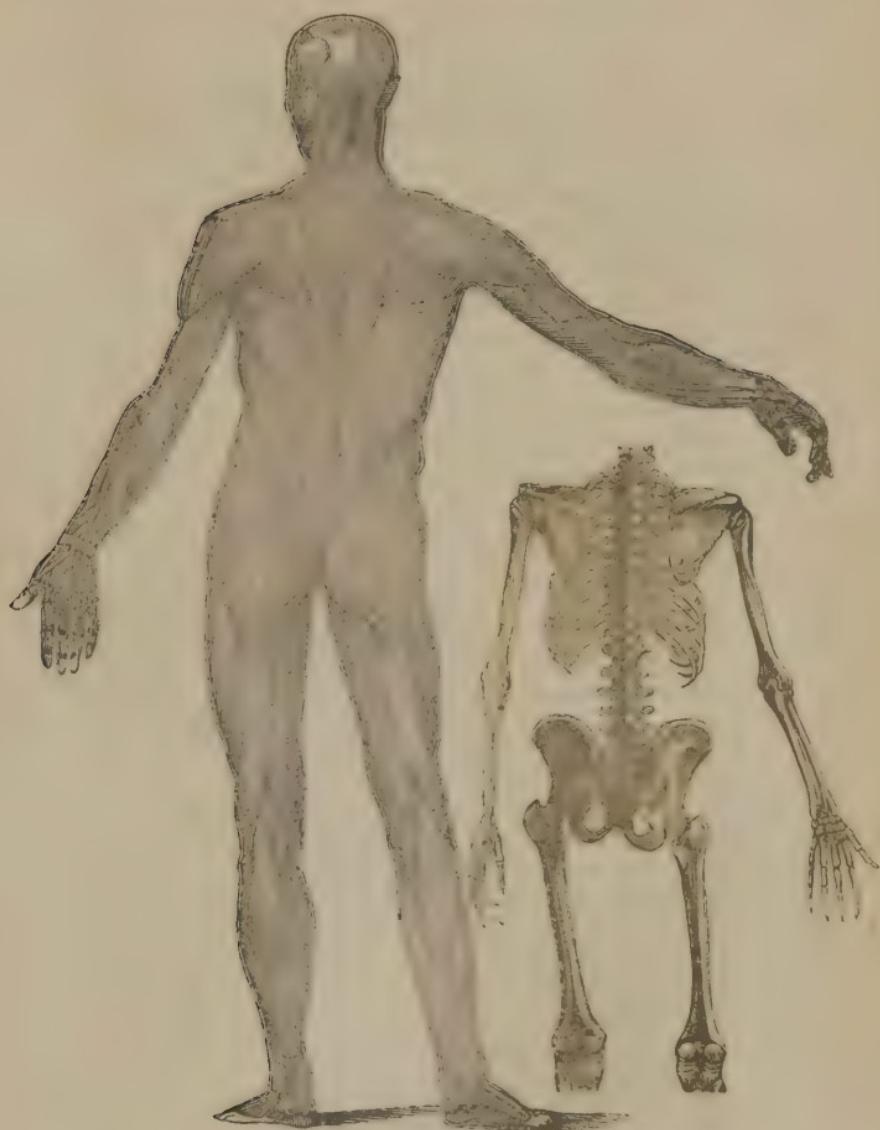
Among the enormous flesh-eaters of America, few have given this matter a fair test. A few years since, quite a large number not only left off meat, but undertook to live on nothing; and, finding themselves starving to death, returned to their former diet. But there are a few who have found themselves well able to live on a generous supply of bread, with other vegetable products, with advantage. Dr. Muzzey, of Cincinnati, Ohio, wrote me, a few months since, that he still continued living exclusively on the fruits of the vegetable kingdom,—which kind of living he adopted some twenty years since,—and found himself healthy and vigorous. A gentleman of my acquaintance, who has spent forty years in seafaring life, now aged nearly eighty-five, says that in all the hardships and exposures incident to sailing on seas and coasts, his health has always been firm, could endure cold better

than the most hardy of his crew; and yet he has never from childhood ate of meat the amount of one ordinary meal per week.

Another gentleman, belonging to this city, a dealer in wood and coal, aged about forty years, informed me, some three days since, that he never saw a sick day — had always been accustomed to muscular labor — knew no weather too cold for comfort — could bear great fatigue — and yet had never tasted of meat from his infancy. A more perfect specimen of manly vigor and soundness could not well be found. Hayward's History of Massachusetts gives account of a man, living in Worcester county, who, at the age of one hundred and sixteen years, was able to go out into the hay-field and mow. He had never ate meat from early childhood. The author of this work has tried this experiment for the last twelve years, and finds himself in more vigorous health, better able to bear changes in weather, and performing more wearing labor, than at any former period in life.

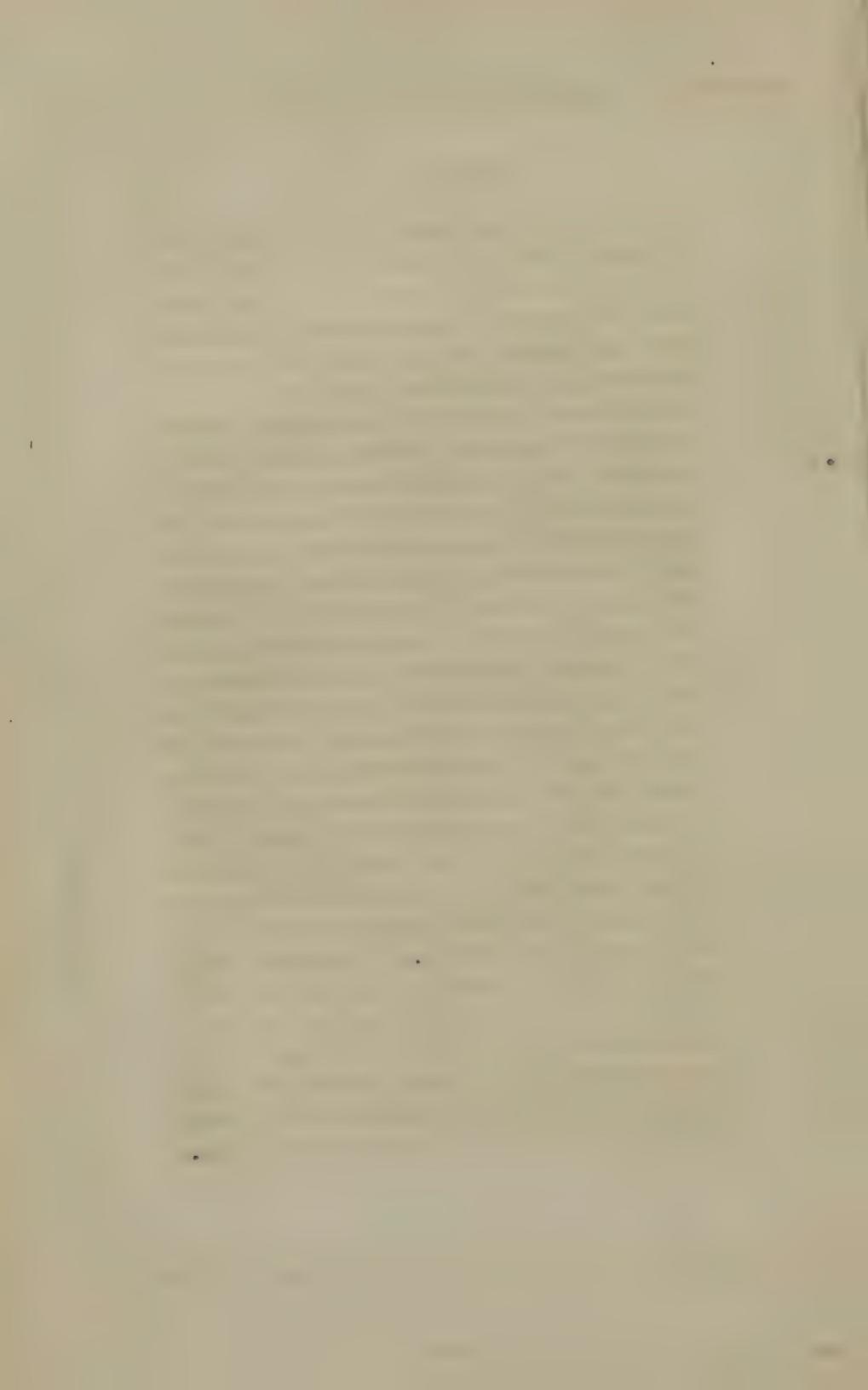
The Hindoos, with a climate decidedly unfriendly to English and American people, live almost entirely on rice. They enjoy uniform health, and are able to perform the most enduring muscular exertions. While the flesh-eating foreigner is afraid of heat and night air, and is groaning perhaps under an inflamed liver, the Hindoo can carry him upon his shoulders over hills and through streams, under a scorching sun by day, and sleeping on the bare ground at night. The natives of Sierra Leone live in the worst climate in the world,

PLATE X. MUSCULAR SYSTEM.



BACK SECTION OF MUSCLES

(See Appendix, p. 299.)



subsisting entirely on boiled rice, with a small quantity of fruits, and are strong, healthy, and long-lived. The laborers on the coast of Africa perform great manual labor, with a muscular power which is considered wonderful, having giant strength and perfect health, and live entirely on vegetable products.

If we were to consult the instincts of our nature strictly, we should hardly be able to consider meat the most congenial diet; for there are few places more uncongenial to the untutored nasal organs than a shop of fresh meats. Besides the unpleasant sight of slain beasts to a reflecting mind,—beasts slain for our devouring,—the smell of their raw flesh is repulsive to all, except those whose natural sense is blunted by the culture and indulgence of a voracious appetite for flesh. It seems to me, also, that flesh-eating is not only unnatural to our instincts, but to our physical organization. The following extract contains testimony on this point which seems appropriate:—

“FLESH-EATING AND VEGETABLE-EATING.—To consider man anatomically, he is decidedly a vegetable-eating animal. He is constructed like no flesh-eating animal, but like all vegetable-eating animals. He has not claws, like the lion, the tiger, or the cat: but his teeth are short and smooth, like those of the horse, the cow, and the fruit-eating animals; and his hand is evidently intended to pluck the fruit, not seize his fellow-animals. What animals does man most resemble in every respect? The ape tribes: frugiverous animals. Doves and sheep, by being fed on animal

food (and they may be, as has been fully proved), will come to refuse their natural food: thus has it been with man. On the contrary, even cats may be brought up to live on vegetable food, so they will not touch any sort of flesh, and be quite vigorous and sleek. Such cats will kill their natural prey just as other cats, but will refuse them as food. Man is naturally a vegetable-eating animal: how, then, could he possibly be injured by abstinence from flesh? A man, by way of experiment, was made to live entirely on animal food; after having persevered ten days, symptoms of incipient putrefaction began to manifest themselves. Dr. Lamb, of London, has lived for the last thirty years on a diet of vegetable food. He commenced when he was about fifty years of age; so he is now about eighty, — rather more, I believe, — and is still healthy and vigorous. The writer of the Oriental Annual mentions that the Hindoos, among whom he travelled, were so free from any tendency to inflammation, that he has seen compound fractures of the skull among them, yet the patient to be at his work, as if nothing ailed him, at the end of three days. How different is it with our flesh-eating, porter-swilling London brewers! A scratch is almost death to them." — *Flowers and Fruits, by J. E. Dawson.*

It is not intended, in this small work, to dwell so particularly upon the kind of vegetable eating most conducive to health, as upon the manner and regularity of eating. There are, however, some vegetables in

common use, which ought promptly and forever to be rejected. Cucumbers, though considered a luxury, should never be eaten. They are cold, indigestible things. True, some stomachs can seem to digest them with apparent impunity : so, too, some stomachs have digested steel ; but this does not prove that it should be used for food. The condiments with which they are usually prepared do not assist in their digestion ; except by over-stimulating the stomach, which stimulating process always tends to weaken that organ. Condiments aid in digestion in the same way that alcoholic liquor aids a laborer in performing an extra task ; which process always tends to weaken the system. There are other articles which might be mentioned as inappropriate for the human stomach ; but a little common sense and observation will generally decide what is proper and what improper.

It is suitable and needful that continual sameness in diet should be avoided. It is better that there should be considerable sameness in each individual meal ; but the kind of articles of which different meals are composed may with benefit be varied. The more simple the diet, on the whole, the better. Complicated food, especially that which is compounded with various kinds of condiments, is bad ; such as very rich puddings, cake, and pastry of various sorts. Mince-pies, wedding-cake, and plum-puddings, as they are generally made, should never be introduced into the human stomach — and the prohibition need never extend beyond the human stomach, for dumb animals

could not be compelled to eat them. Hot bread, just from the oven, should never be ate till it has cooled and parted with its heated gases, which are hurtful to the stomach. Bread which is perfectly cold is more healthy for debilitated digestive organs. Cold bread toasted is not objectionable.

Food should be simple, yet nutritious ; and so prepared — though not with stimulating ingredients — as to be palatable, — inviting to the appetite. If the food be poor, or poorly prepared, the stomach will loathe it. Here is found one cause why some have not been successful in their efforts to simplify their diet ; they have reduced their living to a poverty-stricken quality, by which their whole systems have become weakened. Food should be palatable and nutritious. It is not best that that kind of food should be constantly used which embraces within a given quantity the greatest amount of nutrition ; but the nutritious and comparatively innutritious kinds should be used together : for instance, sugar is too nutritious, i. e., too much nutrition in a given quantity, to be used alone as a meal ; the digestive organs would soon break down with such an encumbrance. But sugar is a good article of diet, when used in conjunction with articles containing less nutrition in the same quantity.

Simplicity of diet, i. e., living on simple, plain food, is exceedingly important in securing good health and a sound constitution. The great cause of the difference between the present standard of health and that of puritan times consists in the difference in the

manner of living. Then, the people lived naturally ; now, they live artificially. Then, their food was plain, homely, and simple ; now, it is rich, delicate, and complicated. Then, the bean-porridge was the luxury ; now, the highly-seasoned meats and the rich pastry. The children were brought up on plainer food than even their parents ; now, the little ones are invited to all the unnatural luxuries in which the parents indulge. Then, a plain brown crust, even without butter, was ate with relish ; now, nothing but the richest dainties will meet the demand.

Fruits of various kinds are proper articles of diet in connection with other food. Apples, pears, plums, cherries, oranges, pine-apples, &c., may properly be made articles of diet, and come under the same rules and restrictions as other articles of food. They may be treated as mere luxuries, to be eaten at any and all times ; because they require very little effort of the digestive organs to dissolve them, and extract their nutrition. It is undoubtedly better, however, that fruit should be taken as other articles of diet, at the regular time of eating, as a part of the meal. As a general rule, fruit should be taken as a part of the regular dinner. Good, ripe fruit, taken in this way, is beneficial to health, by way of variety ; and, if the bowels are at all sluggish, fruits are adapted to remove that difficulty.

## THE QUANTITY OF FOOD.

The quantity of food which it is necessary to take at each meal is not a matter of so much importance as the regularity and simplicity of diet. Some writers on diet have undertaken to prescribe certain limits to the quantity of food to be taken, by weight. This would seem to be a difficult task. To measure out to each one a quantity suited to all the different circumstances in which he may be placed, and to all persons according to their great variety of ages and constitutions, would be a laborious undertaking, indeed : and it seems to be unnecessary. Whoever will govern himself by dietetic law — eat plain food — only three times a day — give time for food to digest — take proper exercise — will find little difficulty in settling the question, how much he ought to eat. Whoever will live right, need not ask his cook to weigh out his quantum of food : only give her a chance, and Dame Nature will settle that matter, and relieve him of all such burden of mind. A person with morbid appetite may eat too much ; and he should limit himself : but a perfectly healthy stomach will easily decide when it is sufficiently supplied.

Many have been much injured by too rigidly limiting themselves in their quantity of food ; so that their systems were not sufficiently nourished. In the effort to change their course of living from great luxury to temperance, they ran over the line, into the opposite extreme. They reduced the quantity and

the quality of their food too low. By this course, they reduced their health and strength, and finally, perhaps, concluded that their former way of living was the best. The system must have nourishment, and the quantity must be varied according to circumstances; and a perfectly healthy stomach will furnish the best index to the quantity demanded.

It is a misfortune for any one, especially for one whose health has become deranged, to keep his mind continually dwelling on the questions, what he shall eat, how much, &c.; because this continued mental anxiety tends to embarrass the free action of the digestive functions, and increase the difficulty. Still, he must give some attention to the subject in some way: he must not be reckless in regard to the laws of his existence. The better way is, let him make himself intelligent on the subject of the laws of his nature, and then he can keep himself within the limits of those laws without mental effort, as well as he can keep himself within the limits of civil law when once understood.

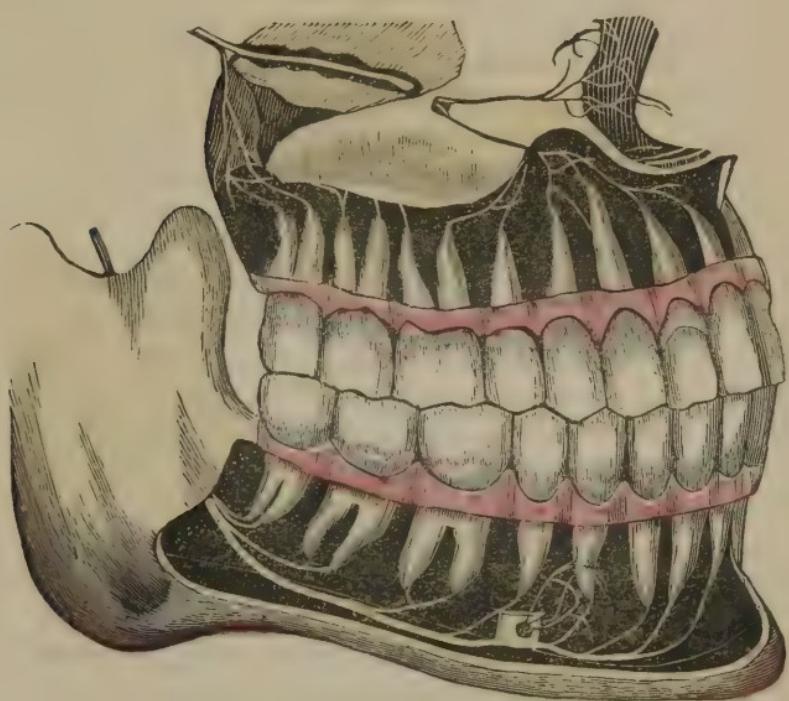
The rule in regard to quantity often mentioned, to "eat until satisfied," is a bad one. The rule often given, too, in regard to the frequency of eating, to "eat when hungry," is also erroneous. When the digestive organs are in a perfectly healthy state, their instinctive demand for food, and their entire satisfaction as to quantity, would be a safe rule; but when we know that a large portion of the appetites of this day are not healthy and natural, but morbid and destruc-

tive, mere appetite ceases to be a safe guide. If a man would have his stomach be a safe guide, he must be sure to let it have a chance to act naturally. Instinct would guide us right; but instinct has been perverted and oppressed till its voice cannot be distinctly uttered.

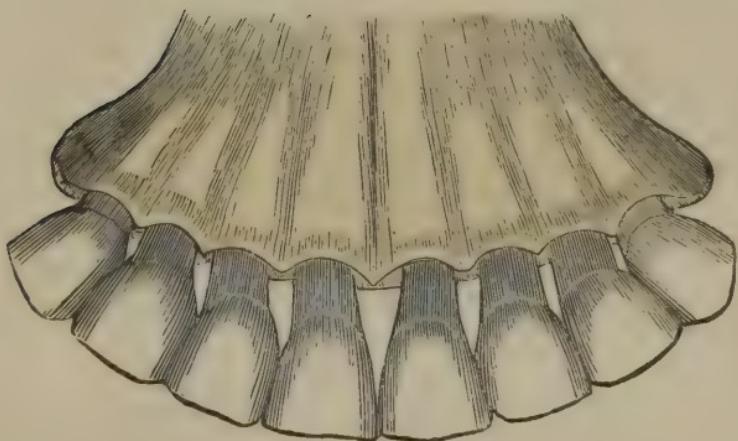
No strenuousness is intended on the subject of animal food: it is better to let each one choose for himself. Yet it may not be improper that some suggestions should be made, some facts stated, and the results of experience shown, for the benefit of any who may be willing to heed them. Flesh-eating is certainly not NECESSARY to health or strength, as every candid mind must see. If it be used, it must be used as a matter of fancy, and not of necessity. If the vegetable world did not furnish all the elements from which health and strength are derived, the sturdy horse and ox would find themselves sadly unfurnished. They need the same elementary principles in their food which are needed for man. Flesh evidently, as already intimated, composed no part of the food provided for man in his primeval state: its use came to be suffered in consequence of the fall. And if, as argued by some, the food obtained only from the vegetable kingdom is not adequate to the sustenance of man, the Creator must have made a mistake in his first arrangement for the support of his creatures.

Some naturalists have classified man as in part a carnivorous animal; but this would not prove it his

PLATE XI. FORMS OF TEETH.



NO. 1. HUMAN TEETH



NO. 2. COW'S TEETH.

(See Appendix, p. 304.)



duty to eat flesh : because either the indications of his classification are the result of his habits of flesh-eating, or they existed before the fall, and mean nothing as relates to his mode of living. The teeth of the carnivorous animals have either conformed to their habits, or they existed in the present form before the fall, and consequently have nothing to do with their eating flesh ; for it cannot be supposed that animals devoured one another in their primeval state. My effort now, however, is not so much to persuade any into an entire disuse of meats, as to show the impropriety of an over-proportion of them.

One objection to eating so large a proportion of animal food lies in the fact that it increases the proportion of our animalism. When the nutrition of vegetation comes to us through the flesh of an animal, it has undergone a sort of animalization ; and, as it passes into our circulation, the proportion of the animalism in our natures is increased by it. A serious objection would seem to lie against such a result ; for man is quite sufficiently animal, without taking this kind of stimulation to make him more so.

The facts supporting the above statement are these : it is well known that, when hunters wish to prepare their hounds for the chase, they confine the diet of those animals to flesh ; and that this course does increase the savageness of their dispositions. By its stimulating, animalizing properties, it excites the animal propensities to increased activity and ferocity. It gives no more strength than that derived from

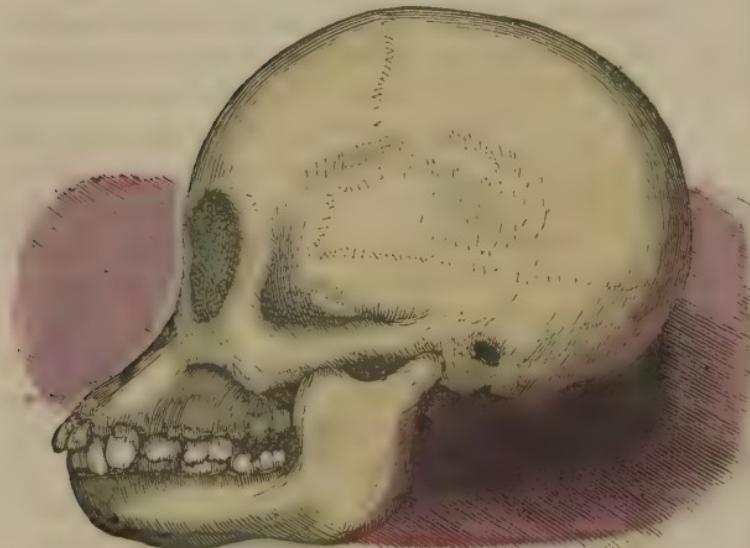
bread ; but it excites the animal passions. When ancient warriors desired to give their soldiery a special fitting for the brutal battle-field, they would feed them exclusively on flesh. When the gamester at cock-fighting is preparing his fowl to win the prize, he confines him to flesh. The experiment of flesh-eating has been tried upon the cow. When she was confined to flesh food, rather than starve, she at length ate flesh ; and finally lusted after it, and ate it as greedily as though she had belonged to the carnivorous race. But it changed her natural disposition to that of the tiger : she became ferocious. And she verified another general rule with meat-eaters ; she lost all her teeth.

It is generally admitted, also, among intelligent people, that eating much flesh tends to diminish intellectual activity ; and that consequently it is not well for those who devote themselves to study to indulge largely in the use of meat. This general impression is founded on sound philosophy. When we increase the proportion of our animal nature, we oppress the intellectual. If students would make easy progress, they must not indulge themselves with eating much flesh ; and the less, the better. If any would be eminent, too, in morals or religion, let them eat but little flesh ; if none, still the better. For, when we increase the activity of the animal propensities, we weaken the power of the moral sentiment, and endanger the rectitude of moral action. We need to encourage and cultivate our intellectual and moral powers, rather

PLATE XII. FORMS OF TEETH.



NO. 1. TEETH OF THE BABOON.



NO. 2. TEETH OF ORANG-OUTANG



NO. 3. TEETH OF THE TIGER.

(See Appendix, p. 305.)



than our carnality. We are naturally savage enough in our dispositions, and fleshly enough in our appetites, without taking a course that will increase those qualities. There can be no question but that the use of flesh tends to create a grossness of body and spirit. A reference to the history and character of different nations alone would prove this. There is certainly a grossness in the idea of one dumb animal's making food of another animal; and the idea of an intelligent being's devouring the flesh of another animate creature is grosser still. And will the advocate of true refinement — will the advocate of moral purity and religion — indulge in such luxuries?

Another objection to animal food is, it vitiates the fluids of the system. Practical demonstration has often substantiated this statement. Take the great mass of cases which require treatment for a humor, and it will generally be found that the individuals thus affected were, themselves or their immediate predecessors, large eaters of flesh. Even the cancer can generally be traced back, either meditately or immediately, to such an origin. And what has been found to be the most effectual remedy in cases of common humor? Abstinence from eating flesh. When we feed on flesh, we not only eat the muscular fibres, but the juices or fluids of the animal; and these fluids pass into our own circulation — become our blood — our fluids and our flesh.

However pure may be the flesh of the animals we eat, their fluids tend to engender in us a humorous

state of the blood. But the meat that is given us in the markets is very far from being pure. The very process taken to fit the animals for market, tends to produce a diseased state of their fluids. The process of stall-feeding is a forced and unnatural one, by which the fluids become diseased; and then we eat those diseased fluids. Some of our meat is fattened in country pastures; but, by the time it reaches us, the process of driving to market has produced a diseased action of the fluids.

If it be argued that these objections may lie against raw meat, but not against it when cooked, it may be answered, that if meat can be cooked so severely as to remove its juices entirely, it might be comparatively harmless; but just in proportion to those juices will be its nutrition, and also its injurious qualities; besides, if the juices could be entirely removed, who would eat the meat? and how much nourishment could be obtained from it?

Animal food exposes the system more effectually to the causes of acute disease. Where the fluids are in a diseased state, the ordinary causes of disease find a more easy prey. Thousands on thousands of those who have been afflicted with, or have died of fevers, small-pox, cholera, &c., might probably have escaped their deadly influence, if their fluids had not been vitiated by animal food. In cases of inoculation for small-pox, a dieting process is recommended, which very much mitigates the malignant character of the disease. But let an individual be inoculated who has

been accustomed to simplicity and regularity of diet, and especially who has been accustomed to abstinence from animal food, and he is already dieted ; he need not change his course ; he is prepared to have the disease with comparative safety. The use of meat is undoubtedly a fruitful source of disease, and a means of enhancing those diseases which are unavoidable. The severest cases of worms in children may, as a general rule, be found among the greatest meat-eaters.

The vitiated state of the fluids is often seen in the character of wounds. In those whose fluids are pure, wounds heal readily. Smooth-cut wounds, if rightly treated, will heal by what is called "the first intention," or the first effort of nature : while in those whose fluids are vitiated, there is a liability to extensive inflammation and ulceration. In cases of rough wounds and bruises, where the fluids are pure, nature gets up a cure with remarkable speed ; but in those whose fluids are corrupted, the process of cure is generally long protracted, and sometimes exceedingly obstinate and unmanageable.

In Humboldt's description of the Indians of Peru, Mexico, Quito, and New Grenada, they are represented as peaceful cultivators of the soil, remarkably exempt from disease, and free from physical deformities. They live almost entirely on vegetable nourishment. In his narrative of himself, he gives the same decided testimony as to the character and habits of various other South American tribes. Our Amer-

ican Indians, who, in their savage state live entirely on flesh, are short-lived, and greatly subject to epidemic and contagious diseases. Whole tribes are sometimes swept off by measles, small-pox, and other maladies. In Nantucket and Martha's Vineyard, in 1764, a fever appeared among the Indians dwelling there, which swept off 202 out of 340, in the course of six months. Its fatality was confined to those of entire Indian blood, and Indian dietetic habits.

The inhabitants of the Pacific islands, in their heathen state, were well built, fine featured, mild and pleasant; and their physical strength and activity was such that Captain Cook's men stood no chance with them in boxing and wrestling. Their diet was almost entirely of vegetables. The Hottentots and New Hollanders, on the other hand, are ill-formed, stunted, sickly and short-lived. Their living consists almost entirely of animal food. They live on lizards, serpents, frogs, and other reptiles, and are without intellect, or a sense of right and wrong.

Eating largely of meats tends, undoubtedly, not only to engender disease, but to make a demand for stimulating drinks. As before stated, Americans are the greatest meat-eaters in the civilized world; and they drink more liquor, considering the light they have, and the means put forth for its suppression, than any other nation. The stimulus of the meats and their condiments leads to a demand for additional stimulation in the form of drinks.

The objections, then, against meat-eating are three-fold,—intellectual, moral, and physical. Its tendency is to check intellectual activity, to deprecate moral sentiment, and to derange the fluids of the body. It is a consequent of the fall, and is adapted to enhance its evils. It is not essential to physical energy and strength: if it is, then the Creator, as before stated, made a mistake when he originally gave to man for his nourishment simply the fruits of Eden.

Animal food is also too stimulating. Simple stimulus mixed with nutrition is what we not only do not need, but its tendency is injurious. Take two laboring men— one lives on meat, the other on vegetables; — the meat-eater may at first be able to excel in the amount of labor performed in a given time, just as that man will excel who takes brandy with his meal; but, in the long run, the man who depends on nutrition that is simple and unstimulating, will endure longer and perform more. Those who choose to eat flesh should take it only at dinner, and be satisfied with only one kind at a time. Those who are inclined to obesity would be far better without any meat; but, if they use it, they should avoid the fat meats, and content themselves with that which is lean. All condiments should be avoided with meats, as so many drugs, which have no place in the healthy stomach.

The objections against eating flesh are, however, less forcible in the case of laborers than of those of intellectual and sedentary habits. While the laborer works off a measure of the evil influence exerted on

his intellectual, moral and physical systems, the sedentary man retains them.

In speaking of the objections to meat-eating, all kinds of flesh are not meant : fish may be excepted ; and fowls are altogether less objectionable than the general run of quadrupeds. And the objections to meat-eating in general are not meant to be urged with the same strenuousness which is intended to be used in regard to other matters presented in this work : for, while these may strictly be resolved into rules of natural law, those may, perhaps, with propriety, come under rules of expediency. Matters of fact have been stated, deductions philosophically drawn, and practical demonstrations presented ; and every candid reader — unbiased by a flesh-loving appetite — can easily come to the conclusion for himself, whether it be better to eat, or to dispense with flesh in his diet.

#### STIMULATING DRINKS.

If we would enjoy health, all stimulants should be avoided as common drinks. They may be useful as medicines, when nature falters and droops, and cannot resuscitate herself ; but, as a beverage, stimulating drinks should be strenuously avoided. When stimulants are taken, the machinery of the system is hurried and driven too fast. And although by this means its activity and power may seem to be increased, yet a reæction must follow ; a corresponding debility must ensue ; then another stimulating draught is called for, to bring the system up again, and then another reæ-

tion must follow. By this course of things, the real, natural vigor of the constitution becomes gradually, and oftentimes imperceptibly impaired. Hence, if we would preserve a healthy system, instead of provoking nature to unnatural action, we must furnish her with sufficient healthy nourishment, and let her regulate her own mode and speed of action. Give her nourishment, and she will furnish her own stimulus, which will be far preferable to any promptings which art can invent. Sustain her in her natural action, and not force her to unnatural speed, which must result in weakening her innate powers. To live naturally, is to live healthily; but to live artificially, is to tempt and foster disease.

Let us suppose a case for illustration: a man undertakes a long journey; his horse naturally and easily travels at the rate of five miles the hour; he can do this day after day, with proper care and feeding, and come out bright at the end of the journey. But the foolish rider is not satisfied with this steady speed; it would be more to his gratification to travel much faster; so he goads up the poor animal to an unnatural speed — say eight miles an hour. He intends that forty miles shall be each day's travel; and by going five miles the hour, eight hours on the road would be required for its accomplishment. But, by means of whip and spur, he performs the allotted distance in five hours, provided the abused beast do not give out before the day's work is finished. Now, any one of common sense can at once judge of the

ability of the animal to perform a long journey, and of his condition at the end of it, under such a system of driving. Every time his goading urges his animal faster than his natural speed, a reaction ensues ; which continued process wears fast upon his natural strength.

Precisely in this way do those whose rule of living is their present gratification, treat their own animal systems. Instead of allowing nature to take her own speed, they goad her on to unwonted action, and consequently lessen her power to perform her functions, and her ability to endure her labor. Why not let nature alone ? Why interfere and jostle her natural operations ? Why spur on the noble steed to unnatural fastness, break down his constitution, and disable him for reaching the end of his journey ? Besides all the wrong in the case, it is bad economy ; what is gained temporarily, is lost, and much more with it, ultimately. Let nature alone, and she will temper her speed to the laws of health and endurance ; she needs no whips and spurs — she asks no help. While she is able to do her own work, all help is hindrance. The animal that is driven beyond his five miles the hour by the whipping process, becomes so exhausted and dull, that even the five miles' speed cannot be performed without increasing the stimulus of the whip. So nature, by continued stimulus, becomes dull and lifeless in her operations, and cannot be kept up to the mark without goading her up more and more.

Let the difference be well understood between stimulants and nutriments. The former term embraces

those things which give unnatural speed of action, but furnish no support, produce no blood, and make no flesh. The latter term embraces those things which support vital action in its natural course, by furnishing material for digestion or respiration, to be converted into blood, and assimilated into flesh. Pure stimulants furnish no blood; they cannot be digested. They may contain some of the chemical elements found in nutritious substances, but which, in their present chemical unions, cannot be digested or assimilated, and are therefore poisonous to the system. The grains contain nutriment—contain substances which, in their present union, can be digested and converted into blood. But put these grains into the process of fermentation, and, by chemical changes, a new substance is formed, of such chemical constitution that it cannot be digested.

ALCOHOLIC LIQUORS of all kinds, whether strong beer, cider, wine, or brandy, should never be taken except as drugs; because, besides the danger of a drunkard's grave, they are all stimulants; they impart no nourishment to the system, but force its action to an unnatural degree. The idea that these liquors promote digestion is all a delusion. They give to the stomach an unnatural and forced action, which, while in health, it does not need; and the longer it is subjected to this driving process, the more will it depend on stimulants. When the stomach is excited in this way, the brain also is excited; and whoever uses alcoholic drinks as a beverage, is so far a drunkard; for

no dividing-line can be drawn — no transition boundary can be made — between him who drinks moderately, and him who drinks excessively. It is all wrong, and only wrong. It is all intoxicating, and only intoxicating. He who drinks a little is a little drunk ; he who drinks largely is largely drunk. To be temperate in the use of good things in their place, is to use them with proper moderation. To be temperate in the use of bad things, or things out of place, is to let them alone. The way to be temperate in religion, is to have a zeal which is according to knowledge. The way to be temperate in fanaticism, is to let it alone. Temperance in eating bread is moderation ; temperance in regard to stimulants and narcotics is total abstinence.

COFFEE is objectionable for a similar reason ; it is a stimulant — a kind of narcotic stimulant, bearing some resemblance to opium ; and so powerful is its action, that it is considered and used as a most certain antidote to poisoning from opium. And it can readily be seen, that unless it was an article of much power itself, it could never overpower such a poison. Coffee should never be placed on any other list than that of medicines ; it should never be drank as a luxury or beverage. Mothers should never be so tender and affectionate toward their children as to give them such an article for their drink. That mother is insane who will value the immediate gratification of her child more than its future enjoyment of health and soundness. Her child will desire no such indulgence, if it has

never been accustomed to it. If the habit has been formed, let it be at once abolished. There are few things over which my very soul has groaned so deeply, as seeing mothers so ignorantly or carelessly undermining the constitutions of those whom they love, and for whose welfare, moral and physical, they are greatly responsible. Yet, if they are determined to gratify their tender ones at all hazards of their constitutions, they are, of course, at liberty to do so ; or, if any are disposed to treat themselves in the same way, there is no civil law against it ; but they break another law, which must be met,—a law of nature written by Jehovah on every nerve of the human body.

A French writer, Mons. A. Richard, says : "This liquor, taken warm, is an energetic stimulant ; it has all the advantages of spirituous drinks, without any of their bad results ; that is to say, it produces neither drunkenness nor all the accidents that accompany it." This is true to the very letter ; it produces all the injurious stimulant effects of aleoholic liquor, except taking away men's senses, and making them stagger and fall.

Dr. Colet thus describes the effect of coffee, when taken in a large quantity for a length of time : "To gastralgia" — acute pain in the stomach — "that it occasions, is united, after a variable space of time, a kind of shivering, a trembling in the left side of the breast, an uncomfortable stitch in front of this region, accompanied by pain in breathing ; and, in addition, a general excitement, the characteristics of which are

analogous to those of incipient intoxication." He tells us, also, that if this course is persevered in, spasms and convulsions are sometimes produced.

Dr. Cottereau says: "I have seen some young persons, who have taken excessive doses of coffee to excite them to labor, fall into a state of stupidity, lose their appetite, and grow thin in an astonishing manner."

A. Saint-Arroman, to whom credit is due for furnishing the above extracts, says: "According to these counsels, given by men of skill, it is easy to comprehend that coffee is sometimes more injurious than the great consumption of it would seem to indicate. Thus, how many persons are there who would know the cause of a disease not understood, and would be less disordered, if they thoroughly knew the effects of this liquor, and the circumstances in which it cannot fail to be injurious!"

It needs only to be added, that, in the estimation of the writer of this little work,—after having used it for several years, and since having abstained from it for some fifteen years,—coffee, in all cases, and under all circumstances, is bad; that its stimulating qualities are decidedly injurious to the system, and ought never to be used, except when required as an antidote to poison, or for some other medicinal purpose. And, what makes it to be dreaded more than many other injurious things is, its evil working is so unseen and delusive. While it does not show itself like alcohol, yet its evil work is more certainly undermining the nervous system; and while it tempts us to believe that

it strengthens and supports, because it excites, yet it slowly enervates. It affects the whole system, and especially the nervous system, by its effects on the stomach. But, besides this, it creates a morbid action of the liver, especially where there is a tendency to bilious affections. It affects the circulation of the blood, and the quality of the blood itself, so that a great coffee-drinker can generally be known by his complexion; it gives to the skin a dead, dull, sallow appearance.

Coffee affects not only the body to its injury, but also the mind. It has been called an "intellectual drink," because it excites the mind temporarily to unwonted activity. "But, unfortunately," says the French writer last quoted, "it is not without great prejudice to mind and body that man procures such over-excitements. After them come prostration, sadness, and exhaustion of the moral and physical forces; the mind becomes enervated, the body languishes. To a rich imagination succeeds a penury of ideas; and, if the consumer does not stop, genius will soon give place to stupidity."

The longevity of some coffee-drinkers has been sometimes urged as proof that coffee does no harm. But we might just as well bring forward the fact that some great alcohol-drinkers, or some great opium-eaters, have lived sometimes to old age, in proof that alcohol and opium are harmless luxuries. It is impossible to judge always of the evil effects of an article we are using by any immediate perceptible result. We

must inquire what is its nature ; and then draw our conclusions as to what will be its ultimate effect. The most violent poisons may be used, after a habit is established, with apparent impunity ; such as tobacco, opium, and arsenic ; and yet no intelligent man would dare to say these are harmless luxuries. They are not harmless ; they expose their consumers to premature sickness, old age, and death. And they see not the breakers until they are dashed upon them.

TEA is another objectionable article, because of its stimulating properties. This is a direct, diffusible, and active stimulant. Its effects are very similar to those of alcoholic drinks, except that of drunkenness. Like alcohol, it gives, for a time, increased vivacity of spirits. Like alcohol, it increases, beyond its healthy and natural action, the whole animal and mental machinery ; after which there comes a reäction — a corresponding languor and debility. The wash-woman becomes exhausted, and must have her bowl of tea to recruit her energies, instead of giving nature a chance to recover herself. She depends upon art rather than nature, and each time lowers the standard of her own permanent strength. She accomplishes more in a short time, while her strength is artificial instead of natural ; but is gradually, though perhaps imperceptibly, wearing herself out before her time. The nurse keeps herself awake nights by this artificial process ; and each time, by imperceptible steps, lessens her natural strength. She thinks, with the wash-woman, that tea does her good — strengthens her, because, like the rum-drinker,

she feels better under its immediately stimulating effects.

The time was when ministers, instead of being largely inspired w.th the Holy Ghost, wrote and delivered their sermons under the inspiration of ardent spirits; but now, seeing that to be morally and physically wrong, they not unfrequently labor under that artificial inspiration, which is quite as effectual, contained in tea. By this process, they gradually impair their own natural energy of body and mind; for, when we drive up and overtax the forces of nature by stimulus, they ultimately fall in the rear of their original process of action. The green teas are much more powerful stimulants than the black. The Chinese do not use the green teas. Not long since, meeting a young Chinese, the inquiry was made why they did not drink their green teas. Putting his hands up to his head, he said, "They burn all the hair off." They were too stimulating to the brain and nerves.

Some have endeavored to understand from Liebig that one of the elementary principles of tea — theine — and of coffee — caffeine — which are the same in their primary elements, is important in the formation of bile. But it seems very plain that he only shows their medicinal properties to be appropriate in morbid conditions of the liver. In the same connection he shows that opium and cinchona contain elements which go into the formation of the substance of brain and nervous matter. He certainly does not mean to recommend these last-named drugs as articles of diet.

Black tea will favorably affect a torpid liver; but when used, it should be taken like other medicines, and relinquished when its object is answered. But, if taken in health, it would only tend to weaken that organ by over excitement, and ultimately produce the disease which it otherwise might be adapted to cure. So it is in regard to the use of any other drug, if used habitually. In all cases its stimulus is temporary, and followed by proportionate reäction and debility. It as truly intoxicates the nerves as alcohol; and its effects in strong doses are quite analogous.

See a party of ladies met to spend an afternoon, in a sewing-circle, it may be. Toward the close of the afternoon, their fund of conversationalists becomes somewhat exhausted; but soon come the tea and eatables; and, notwithstanding the opposing influences of a full stomach, the drooping mind becomes greatly animated, the tongue is let loose, and the words come flowing forth like the falling drops of a great shower. What does all this mean? Whence the cause of such a change? It is the inspiration of the strong cups of tea. Then is the time for small thoughts and many words; or, it may be, the sending forth of fire-brands of gossip and slander; or if, perchance, religion be the topic, the inspiring power of tea will create an excited feeling very closely resembling that produced when religious rum-drinkers shed alcoholic tears.

Tea, in large doses, produces convulsive motions, and a kind of ntoxication. It enters into the circu-

lation, and affects the complexion ; it is not difficult to detect a great tea-drinker by looking at his skin, which loses its bright and lively cast, and puts on a deadly lifeless, dried, and sometimes sallow appearance. It is said that in China the great tea-drinkers are thin and weak, their complexion leaden, their teeth black, and themselves affected with diabetes. Cases have not unfrequently come under the immediate inspection of the writer, where tea had for years almost literally been the food and drink, especially of seamstresses, who would sit up late nights. In such cases, about the only remedy would be, to prohibit the further use of it. But generally this prohibition would be no longer heeded than while being uttered ; for their dependence on it, and love for it, could not be easily broken up ; and but small compensation, in some cases, would seem to be gained by its discontinuance ; for tea had almost eaten them up ; leaving little more than bone and sinew, and a few scraps of dried flesh.

In short, all stimulants are so many internal fires, which gradually burn up the machinery of organic life. Consequently, whoever uses tea or coffee as a common drink, spends his money for that which not only does him no good, but evil, and that continually. They are both innutritious, and stimulating to a degree which it is difficult for their devotees to calculate. Now, which shall we do ? Abstain, and bring under this evil appetite, or will we gratify it ? Will we deny ourselves, and derive the incalculable benefit as a compensation, or recklessly go on, and take the conse-

quencies? Will young ladies and gen'lemen treat their physical and mental systems lawfully, and save to themselves a good constitution, or will they, at all hazards, indulge themselves in unlawful appetites, and have no principle by which to govern themselves, but their own gratification? Will they have regard to their own benefit, and that of coming generations, or will they, like the devotee to the intoxicating bowl, live for to-day, and let to-morrow provide for itself?

Tobacco can scarcely be reckoned a drink, but it comes properly on the list of stimulants, and therefore receives some attention here. It is one of the most powerful narcotic stimulants which vegetation produces. It is classed by Linnaeus with Foxglove, Henbane, and other poisons, under the name *ATROPA*, — one of the FATES, — whose duty was to take life. Its first influence is felt upon the nervous system. It excites and then deadens nervous susceptibility. When first taken, it acts with great and very perceptible power; but, after the habit of its use has been long continued, the nerves lose their sensibility to it in a great measure; they become deadened and blunted to its apparent effects. Still, the poison is there, and is gradually undermining the vital forces of the system.

Besides affecting the nervous system, it carries its essence into the circulation of the blood, which can be detected in the blood drawn from the veins of those who use it. It enters not only into the fluids, but into the solids of the body; so that the Cannibals, when they meet with the body of a tobacco-user, detect its

presence in his flesh, and throw it away. Its essence is also given off continually by the skin in the sensible and insensible perspiration. In this way it is carrying gradually its deadly influences into every portion of the body. The water in which a chewer or smoker bathes himself, when he stays in the warm water till perspiration takes place, is so strongly impregnated with its poison, that it will kill flies and vermin.

Tobacco creates, at first, a feverish action ; a single cigar, as before stated, increases the pulse from fifteen to twenty strokes in a minute. Its secondary effect is to deaden the vital action of body and mind ; which influence can be easily felt, if its stimulus be suspended forty-eight hours. In this way it gradually wears out vitality, and shortens life ; so that those who indulge this ungentlemanly and contemptible habit are probably cutting off, by degrees, twenty-five per cent. of their natural existence. There is more damage done at present to the health and soundness of the men of this generation, by this waste of some 30,000,000 of dollars annually in these United States, than is done by the use of alcoholic liquor. Those who would know more of this matter must read my work on "**THE BEAUTIES AND DEFORMITIES OF TOBACCO-USING.**"

## NOURISHING DRINKS.

As it has been said before, so let it be repeated, — which should be, at all times in health, a standing rule, — give to nature a sufficient nutrition, and she will fur-

nish her own stimulus, far better than anything which art can do. Support nature, and let art go begging. Live naturally, and not artificially. The natural inquiry will now be, What shall we drink?

COCOA is a healthy drink. That which comes in pound and half-pound papers makes a very good drink ; but, on account of its oily nature, which is objectionable, the cracked nut of cocoa is preferable : but caution is necessary not to make it too strong, because it contains a large amount of nutrition in a small compass, and may oppress the stomach and produce headache. The cracked nuts and shells, which come in bags of about thirty pounds, make the most convenient form for use. This mixture, made in moderate strength, say according to the following proportion and rule, is a nutritious, healthy drink. Take half a common teacupful of this cocoa-mixture, and add one quart of cold water ; boil moderately for about six hours, adding more water to supply the portion which boils away ; it is fit then for use, by adding milk, or cream, and sugar. This makes a good substitute for coffee in the morning, and the same or simple shells in place of tea in the evening. There are various nourishing, healthy drinks, of a domestic character, such as bread-coffee, and others, which it is not important to describe or recommend.

A cup half filled with hot water, sweetened and filled up with milk, makes a warm drink, fit for the most fastidious appetite. Hot drinks of any kind are objectionable. They excite the pores of the skin, and

expose the system to take cold by sudden changes. They excite by the force of heat, and then debilitate the stomach. They should only be taken about blood-warmth. Moderately warm water, of itself, without considerable milk or cream, if taken to much extent, is also weakening to the stomach.

Large quantities of any kind of drinks should be avoided. Even cold water may be taken too largely. Much depends upon habit : if we accustom ourselves to drinking much, we shall want much ; if we accustom ourselves to drink but little, we shall want but little. The objection to a large quantity is this : it distends the stomach beyond its natural dimensions, and therefore weakens it ; it also dilutes the gastric juice, and therefore weakens that fluid. One or two common tea-cups of any kind of drink, taken with our meals, is sufficient. If we take more, it injures the digestive process. Laborers, at their meals, and between meals, are inclined to drink far too much. Their thirst, on the whole, is no less for drinking so largely, and they weaken themselves by it. Besides, in hot weather, many are seriously injured, and even sometimes destroyed, by too large quantities of cold water. If they want to drink often, they must confine themselves to very small quantities at a time.

Unfermented beers — root, hop, and ginger beers — are healthy drinks, if not taken too largely. Soda drinks, in the form of soda powders, or from soda fountains, are also healthy, if used with moderation. The carbonic acid gas which they impart to the stomach does not excite, but is a moderately tonic and cooling beverage.

## PARTICULAR DIRECTIONS

## TO PARENTS AND GUARDIANS.

PARENTS have a responsibility in regard to their offspring originating prior to their birth. Their own state of health — the health of father and mother — has a very important bearing upon the constitutions of their yet unborn children. If a father's nervous system has been marred and broken by habits which are at war with nature's law, the children following him will be more or less unhappily affected. While, then, he is doing wrong to himself, he is doing wrong and bringing suffering to his posterity. If a mother's system has been weakened by violations of law, her children will be obliged to participate with her in suffering the penalty. And, having received the inheritance of disease or debility before birth, they must, more or less, be the partakers of it through life. Parents have also a heavy responsibility on them, touching the moral character given to their children before birth. If parents are accustomed to undue indulgence in any of the natural propensities,—in eating or drinking, or any other animal appetite,—their children may inherit appetites of the same kind, possessing a similar degree of undue activity and moral tendency.

In the same way children are affected in their dispositions. A child, after birth, and more or less through life, will give a living illustration of the feelings and immediate character of his mother during the period of her pregnancy. If the mother, during that

period, especially the latter part of it, indulge a gloomy, evil-foreboding state of mind, her child will give proof of it in after life. If she indulge a peevish, or fretful, or crying disposition, her child will give her ample testimony to the fact after birth. Some have inherited, directly from a mother, an almost unconquerable appetite for strong drink ; some for tobacco ; others, an almost uncontrollable inclination to theft ; not because their mothers, in all cases, were habitual drinkers or thieves, but because they suffered strange appetites and feelings to affect them strongly some time during their pregnancy. Some physicians would deny the truth of these statements ; but no one who has taken the pains of observing facts touching this matter, will be found in that category ; for facts are unconquerable things. The inspired proverb, — “Train up a child in the way he should go, and when he is old he will not depart from it,” — contains a great practical truth as a general rule ; but, under the most judicious discipline, the child will bear, in greater or less degree, the moral complexion and physical appetites which his mother gave him before she gave him birth.

Fathers, as well as mothers, and all those with whom a mother may associate, are involved in this responsibility. The father should remember that his manner and treatment of his wife during her pregnancy has much to do with the disposition she may possess during that period. He should be careful to remove, so far as possible, every source, real or imag-

inary, of uneasiness, unhappiness, peevishness, or gloominess, from her way. He should take pains to make her happy and cheerful; and see that every appetite which comes up is, if possible, forthwith gratified. If that appetite should be for strong drink, it had better be gratified to the full, rather than that she give, by that continued longing, an indelible imprint of that kind upon her offspring.

In the light of these truths, what tremendous responsibilities are evidently laid upon parents! The physical appetites, mental inclinations, and moral feelings, in a very large degree, are enstamped on the character of children so deeply in this way, that they may remain visible in all after life. If, through the moroseness of the father, the mother be driven into a desponding, discouraged and lifeless state of feeling, her child may bear traces of the same features of feeling for life. If she indulge in an irritable or ill-tempered disposition, she will probably mark these characteristics on her offspring. If, on the other hand, she indulge a habit of great levity, trifling or recklessness, she will probably see more or less of her own likeness in her child.

Responsibilities of unmeasured extent also are laid on parents, in regard to the influence of a right physical training of their children for the security of health, during childhood and youth. One great cause of the feebleness of constitution with which the great body of community is at this day afflicted, may be found in the total ignorance or recklessness of parents and guardians

of the laws of health, as applied to those under their care. To look in upon many domestic circles, and see how the children are managed, is enough to move a heart of marble with sorrow for the children, and with indignation towards their parents. The children may be seen, about every hour in the day, with a lunch of bread, or pie, or cake, in hand. Their young and tender stomachs are kept in continual confusion and toil. Consequently, a deranged tone and action of that organ must exist, which prepares the way for other unnatural habits of eating and drinking, and lowers the tone of mental sprightliness and moral feeling.

Children should eat only three times a day. They should be brought under the same dietetic rules which are laid down for all persons. It requires about as much time for their organs to digest food as is required for grown persons. And, if the digestive process be hurried and confused, their food does not nourish them as well, and they cannot grow as strong and robust. Little new-born infants' constitutions are not unfrequently ruined for life, by mismanagement. Because the child cries a little, it must be dosed with a little peppermint, or anise-essence, or paregoric, or some other stimulating article, which begins at once to arrange its stomach ; and through its stomach, its whole system is injured, and perhaps for life. And if the inquiry should be made, in after years, what can be the cause of such a feeble, slender constitution ? an enlightened observer might be able to reveal the

secret, by showing the treatment it received in infancy.

A systematic diet should always be adopted by mothers and nurses at the very dawn of the child's existence. In the first place, after birth, a little cold water only should be put into the child's mouth. The habit of beginning to give some stimulant, as though the Creator of the child had given it only half life enough, is perfectly murderous: instead of giving it a chance to live of itself, a course is taken which is adapted to kill it; or, if not kill it, to maim its little constitution for life. If the writer of this could be heard, he would "cry aloud, and spare not," in the ear of every nurse, with the little being in her arms, **LET THAT CHILD LIVE!** The Creator gave it natural life: he made it to live: and it will live, if not killed. If it be necessary to give the child any nourishment before it can obtain it from the mother, it might take a little slippery-elm water, or something of that mild and simple nature: but, if it can draw its first nourishment from the fountain which the Author of its being has provided, it is better.

Babes should be nursed but three times a day. This may seem a preposterous rule; but let us reason together upon it. The food which nature has provided for the child is adapted to its age and capacity for digesting; and it requires about the same length of time for the infant to digest its meal as it does the man of ripe age to digest his; and the various steps in the digestive process are the same in both

cases. Then, if five hours are required to complete the process well, why disturb it till it is finished ? By letting the child have only its regular breakfast, dinner, and supper, it digests its food well, and is well nourished by it. But, adopt the course usually taken, and the little one's stomach is kept confused and oppressed, and its system is but half nourished from the same quantity of food which would be requisite under a regular system. As infants are usually treated, they are subject to repeated vomiting, colic, and, not unfrequently, fits ; and the cause is obvious : the stomach has been overloaded. Only feed infants right, and there is no reason why they should vomit, any more than grown persons. What danger can there be of a child's suffering from want of food before the expiration of the five hours between meals, when they not unfrequently go from twelve to twenty-four hours, and sometimes longer, after birth, before they take any substantial nourishment ? The idea that a child will suffer hunger, if it do not take food oftener than once in five hours during the day, is all nonsense ; and, worse than this, great injury is done by such a notion. The "little and often" system is destructive — contrary to the laws of health — contrary to true philosophy and reason ; and should forever be abandoned.

As infants are now treated, they have but a small chance for life. By confusing and fretting their stomachs, they have wind, and colic, and heart-burn, and other distresses : then, if they cry, they are put to

the breast, and nursed so full that they cannot cry. They become so oppressed as to produce stupefaction of brain and nerves; and then, if at all restless, they are put into the cradle and rocked from side to side, till they have no senses left. Then the child, from extreme pressure of the stomach, vomits—Nature's kind effort to save it from fits and death. Then the mother or nurse exclaims, — “What a healthy child! See how it vomits!”

Why does the child vomit? Because the abused stomach rebels against its ill-treatment, and tries to save itself. What sort of symptom of health would it be in an adult to go along the street vomiting up his dinner? Would the old ladies put their heads out of their windows, and exclaim, — “O, what a healthy man that is!” The stomach of the child should be so well treated that there should be no occasion for its vomiting. It should have a full breast on which it can depend for a full meal, three times during the day, and never be nursed during the night. If the breast be scanty in its allowance, the child must nurse what it can get, and have its meal finished by a little diluted sweetened new cow's milk. Then let it be gently moved about for a while, and finally go to sleep.

In this way the stomach has time to digest its food, and time to gather up its forces for another regular meal. Its meals should be about the time of regular meals for adults. Under this course, there would be little occasion for using those rocking brain-destroyers. Cradles could then be broken up for

fuel — a much better purpose than their present use. If any old ladies think they have more wisdom, let them attend the school of natural law another term : let them study Nature, and demonstrable facts. This matter has been tested. Since entering the medical profession, nearly thirty years ago, it has been my determination to examine and test these and other matters pertaining to this general subject. And these truths, as demonstrated by myself and others of my acquaintance, fully sustain and justify my position.

The most healthy and robust children which have ever come under my observation, were brought up in the way here advised. No failure in this experiment has ever come under my knowledge. Let those mothers try it who really wish for healthy children. Let the child have all it wants three times a day. Do not half nurse or feed it, and thus starve it to death, and then cry out condemnation : but give it a full breast, or make up a full meal by feeding : keep it awake an hour, and then let it sleep, if it choose, till within a short space of another meal. Keep it clothed in accordance with the weather and the season, and give it free air to breathe ; and not keep it stived up in a room hot enough to roast beef, where the oxygen is all consumed by the fire and respiration, and no fresh air is admitted.

If infants from the first were treated in this way, they would not only be more healthy, but altogether more quiet, and easy to be taken care of. Then, instead of putting the child to the breast to stop its mouth

and get rid of its crying, it would feel better, and be far less likely to cry. - And generally, instead of worrisome nights,—usually caused by a disturbed stomach,—it would sleep quietly till morning; and the mother with it. The food of the infant, taken just before it sleeps, or in the night, interferes with its quiet rest; just as the rest of an adult person is disturbed from a similar cause. This method has been tried, and proved successful: let others try it.

A gentleman recently informed me of a test he had made in this matter. A child fell into his hands who lost its mother at its birth. He found himself obliged to bring it up by hand. He began and continued his undertaking, by giving the child as much milk, properly prepared, as it would receive three times a day, and no more. He said,—“A more healthy, thriving, robust child I never saw. It was subject to none of the ordinary illnesses of children, has continued in perfect health up to the present time, and is now twelve years of age.” A relative informs me that his family physician in Vermont is bringing up his children in this way, from their birth; and that they are unusually healthy and vigorous.

When children are old enough to take solid food, they should have only three meals a day. If they eat oftener, their stomachs will be deranged, and their food will not so well nourish them. If any mother will take pains to look at the laws of digestion, she will at once see that no child can take food oftener

than once in five hours, without interfering with a previous meal, and injuring the healthful operation of the digestive organs. Those young people who have been brought up on the exclusive system of eating but three times a day, have been found to be more than ordinarily strong and healthy. While others have been afflicted with worms, colic, cholera-morbus, and a host of other ailments common to the young in general, they have usually escaped.

Why, then, will mothers suffer their children to violate the laws of their natures, and expose themselves to suffer the penalty of those violated laws? Will a mother have such a tender concern for her offspring's gratification, as to suffer it to destroy its own comfort and health, and perhaps life? It is often said, "My child has no appetite for breakfast; therefore it must have a lunch before dinner." But this is a sure way of prolonging the difficulty; the child will never be likely to have an appetite for breakfast, as long as this irregular and unlawful course is indulged; and especially as long as the child knows that he may depend on the precious lunch. Let the child go from breakfast-time till dinner, and it will not be long before he will eat his regular breakfast. If parents would secure for their children a healthy appetite and a sound constitution, let them rigidly insist on their eating but three times a day, using simple food, and having other things in keeping with nature's laws; and, so far as all human means are concerned, they may be sure of accomplishing their purpose.

The almost continual hankering for food which many children have, arises wholly from a habit of constant eating. If their eating were reduced to a regular habit, their appetite would become regular. This irregular appetite is not natural; it is created, and unhealthy. If we get into a habit of eating seven times a day, we shall hanker after food as many times. If we once establish a habit of eating but three times a day, we shall want food only as many times. Now, what will mothers and nurses do? Will they begin with the infant by a regular system, and continue it? or will they go on in the old beaten path, to the injury of those they profess to love and cherish? Will they make a mock of parental love and fondness, by unrestrained and unlimited indulgence? or will they love so sincerely as to keep the child from every hurtful thing? That pretended love, which, knowing the evil consequences, at all hazards, seeks only to gratify, proves its own falseness. Shame—SHAME on that mother's love which passes heedlessly by her child's chief and ultimate good, to indulge it in a momentary gratification, or to save herself the trouble of controlling its solicitations! Shame on that mother's humanity, even, whose refined and tender sympathy cannot refuse indulgence where health, and, it may be, life are at stake! If mothers and fathers have a substantial affection for their offspring, let them manifest it under the dictates of reason and common sense — let them seek their permanent good. If those having the care of children would be able to give a

final account of their guardianship in peace, let them, next to their morals, seek, for those under their charge, soundness of constitution. And, in doing this, they do perhaps as much for their morals as could be done through any other means; for physical and moral health are closely allied.

## TO LITERARY INSTITUTIONS.

There is no class of persons who are under higher obligations to observe the laws of health, than those who are connected, whether as teachers or pupils, with literary institutions. Thousands have been ruined for life, so far as the enjoyment of health is concerned, and lost to the world, with all their native talents and acquired abilities, by violating those laws. Whereas, by attention and obedience to them, a balance between the healthy action of body and mind might have been preserved, and themselves and the world would have enjoyed the avails of their existence. Young men and young ladies enter upon a course of education with good health, and, long before that course is finished, their constitutions give way, and they are obliged to retire from study; or, if able to finish their education, they have scarcely physical energy enough left to apply their mental resources to any practical purpose. To effect a change which shall obviate this evil, will require the attention both of teachers and students.

Students should live on simple food; and remember to "eat to live, and not live to eat." To gor-

mandize it beneath the dignity of one who has mind enough to make it worth while to submit it to a process of culture : indeed, a man who has the soul of an intellectual being will never do it. Students should avoid those things which are hard to digest. They should have food that is palatable, and well, yet with simplicity, prepared. The less animal food—even none at all—the better.' They should rigidly and scrupulously confine themselves to three—if not to two—meals a day ; and for reasons given explicitly under Dietetic Rules. They should never apply their minds to study or reading at least for one hour after their meal is finished : but they should make themselves amused and cheerful in some way which neither requires the effort of body or mind : they should be at leisure, and endeavor to enjoy themselves. The reason for this course, as before stated, is, that if the nervous energies, required in the digestive process, are called away to some physical or intellectual effort, great injury is done to the digestive department. From this cause, and perhaps mainly this, thousands on thousands have entirely broken down, and rendered themselves sufferers for life.

After one hour from the time the meal is finished, they may with safety set themselves down to study ; i. e., if they have eaten with such moderation as all students ought to use ; if not, they should wait longer ; — rather, if they will not eat properly, let them retire from the institution, which is no place for gluttons, and devote themselves to corporeal labor—labor at

the anvil, or in the western wilds, felling trees, where they could practise engorgement with comparative impunity. After spending nearly a half-hour in thoroughly masticating their meal,—being careful not to spend that time in too much talking, which not only interferes with mastication, but may agitate the mind, as would be the case in all argumentative conversation,—and then one hour in gentle amusement or cheerful leisure, they are ready to bend their whole mental force to study. Under this arrangement, six hours a day of study will accomplish more, in the long run, than twelve hours in the ordinary way.

Exercise is another duty of students. It is exceedingly important that a balance between the mental and physical energies should be maintained; otherwise the body withers under its superincumbent weight. To preserve this balance while the mind is laboring, and the body untaxed, artificial exercise must be instituted; for bodily strength cannot be promoted without some kind of bodily exertion. If the electric forces of the nervous system are all kept under tribute to the intellectual faculties, the rest of the system becomes weakened from want of use, and the mind soon wears out the whole body.

The best time for exercise for students is about an hour before meal-times; so as to give about three-fourths of an hour for hard labor, and a quarter of an hour to rest, before eating. Exercise in this way can be taken once, twice, or three times a day, as circumstances may require. The length of time devoted to

exercise, and the severity of the effort which each one requires, cannot be defined by certain rules : the constitution and circumstances of each individual, aided by common sense, must determine. But every individual student requires some exercise ; and it should be taken sufficiently prior to a following meal to give a little respite from exertion just previous to sitting down to eat. A division of time, between each meal, sometimes like the following, may do as a general rule : Spend half an hour in eating, one hour in leisure, two and a half hours in close study, and one hour in labor, leaving off in season to get the system calm before the next meal. One hour each day, however, will generally be found sufficient, if all other habits are right.

The kind of exercise to be taken may properly be a matter of inquiry. To settle upon any one kind for universal application, may be difficult. A mechanic's shop exercise may be very beneficial for body and mind. At any rate, it should be something which is adapted to give not only exercise to the muscular system, but, if possible, at the same time, a source of amusement. Making trunks and boxes may secure this object. Sawing or chopping wood, however profitable it may be, may require too severe exertion, and may not prove to be very much amusement to the mind. The bowling-alley, aside from the odium of its general character, its bewitching charms, and its tendencies to various kinds of dissipation, might afford a most desirable method of promoting muscular strength and mental exhilaration. Exercise in the line of agricultural

pursuits, when it can be had, is, perhaps, everything considered, the best kind. In the use of this, there is the advantage of the open air, the smell of vegetation, the effluvia from the ground, and the vigorous action of the muscles of the arms and chest. This last benefit — one which may be had in other modes of exercise also — is very important generally, and especially where there is any tendency to falling in of the chest and lung affection. Gymnasium is an exercise of very excellent influence.

Walking is another kind of exercise usually employed; but it is one of very little service generally. It is better than nothing, but very insufficient. It only calls into exertion the lower limbs, which least need exercise, while the muscles of the chest and abdomen, which require it most, are not called into exertion. Horse-back exercise has the same deficiency. At female schools some method should be chosen for exercise which combines the three important considerations above mentioned, namely, general muscular exertion, adapted to their strength, mental exhilaration, and the special action of the arms and trunk. Jumping the rope is too exciting and severe. A bowling-alley for young ladies — who, of course, would never allow themselves to become dissipated — would be an excellent exercise and amusement for them. Let all students remember that, if they would preserve good health, **THEY MUST EXERCISE**; and that, in doing this, they also give vigor and vivacity to the intellect, as well as energy and health to the body.

The managers of literary institutions have a great responsibility in this matter. If they would secure the physical and intellectual welfare of those under their care,— which doubtless they would,— they must put themselves to the trouble of providing for and regulating means to accomplish that object. One of their first duties consists in passing a careful scrutiny upon the habits of those proposing to enter an institution. No pupil should be admitted of known vicious habits ; for he is not only in the way of ruin himself, but his influence will be detrimental to others. Does his breath give proof that his whole circulating system is impregnated with the essential properties of alcohol ? He ought not to be admitted. If the institution has any regard for the physical, intellectual and moral character of its young men, regard for the influence of the institution upon the world, regard for the ultimate reputation which it may sustain among moral and Christian men, or regard for the approbation of Heaven, let them admit no young man with the taint of alcohol in his breath and upon his soul.

Tobacco-using, by chewing, smoking, or snuffing, is a vice of more powerful influence on the nervous system, and the physical functions in general, than the drinking of alcohol in the same proportion. It more effectually enslaves its victim. It binds him with stronger bands to its degrading service. It is a habit almost infinitely more difficult to abolish, than to give up the intoxicating cup. It more effectually intoxicates the body and mind. The word “intoxicate,” from the

Greek, Toxon, literally means to poison. Tobacco is a more powerful poison. It makes greater inroad upon the natural functions of the body. It is doing a worse work on the physical welfare of the men of this generation. Hence, when its influence is suspended, there is a feeling of greater loss; so that men will far sooner relinquish the bottle, than their tobacco. And while it is working with such power upon the body, it affects mind and moral feeling. The same progress in intellectual and moral culture can never be made, other things equal, in those devoted to this vicious habit. Hence, let it be written upon the moral ensign of every college and seminary, "NO SMOKING ALLOWED HERE."

Provision should be made for the exercise of students. Means for agricultural exercise should be provided, if possible, for that portion of the year in which it is practicable. A mechanic's shop, or something to subserve the same purpose, should be provided for the winter season; and a requirement on every student to attend on this important duty, should be established; so that no loafer should find an easy passport through any literary institution.

Recitations should be so arranged as to accommodate the periods allotted to eating and digesting food, and those devoted to labor and relaxation. A recitation should never be required just preceding or just succeeding a meal. If it immediately precede a meal, the nervous energies have been drawn so intently to the mental effort, that they cannot at once be diverted

and drawn toward the digestive effort. Therefore a short space should be granted for relaxation from any active employment of the nervous system, immediately preceding a meal. If the recitation immediately succeed a meal, the process of digestion is interrupted. It would be far better that recitations should be so arranged as to come somewhere within the period allotted to close study. Then there would be no interference with the natural action of the system. But, to go into a recitation-room just after a meal, is a violation of law which is perfectly suicidal ; and to be forced thereby academic law, is gradual manslaughter.

And now the important question is, will the managers of literary institutions regulate this matter so as not to stand in the way of their students' obeying the laws of their being ? Will they hinder, or will they facilitate, their employing the proper method of securing health of body and mind ? Will they aid in keeping up such a balance between mental and physical power, that there may be a prospect that the world will be benefited by the existence of their institutions ?

The food and drinks, also, which are furnished, should be adapted to the best interests of their students. If meats be set aside, pains should be taken to furnish a palatable and wholesome vegetable diet ; and as coffee and tea should never see the inside of any apartment of a literary institution, nourishing drinks should be furnished in their place. Every institution's guardians should most earnestly recommend, if not

require, ten o'clock to be the hour for closing study and for retiring to rest; for there is nothing gained, but much lost, by studying after that hour of night. It is generally admitted, by medical men, that sleep is worth more before than after midnight,—that two hours' good sleep before twelve o'clock is worth more than four after that hour.

## TO PROFESSIONAL MEN.

Those who accustom themselves to intellectual labor require habits of living somewhat different from those who are engaged in pursuits of a physical character. Though all should strictly obey the laws of their natures, physical and intellectual, yet, while some habits of living may be lawful, they may not be, under certain conditions of life, expedient; and, indeed, what may be lawful for one, under certain circumstances, may not be lawful for another, under other circumstances. For instance, as before stated, a person engaged in farming, can bear the evil effects of animal food better than one of sedentary and literary habits. Since meat-eating, according to general admission, tends to oppress and check mental development, it becomes inexpedient, if not unlawful, for persons devoted strictly to intellectual pursuits, to practise it. It is doubtless inexpedient for any to use it; but, in the case of those whose skill and usefulness depend upon an unclouded and active intellect, this inexpediency comes near the range of moral obliquity.

In proof of the effects of flesh-eating on the intel-

lectual faculties, &c the difference between the French habits and character, and those of that portion of the English who live largely on animal food. The English nobility are great meat-eaters, using it largely at each of their principal meals, and especially at their late suppers. What is the effect of this long-established habit upon their physical and intellectual character? They are generally inclined toward the lymphatic temperament—a consequence of habitual stuffing with roast-beef, and other high-seasoned meats. And while we find a very few high-toned geniuses among them, the mass are indolent, stupid, and unintelligent. As a general rule, their great men have arisen from among the middle class, and from under different dietetic habits.

The French live principally on vegetables. They generally possess the nervous temperament,—a temperament adapted to literary and intellectual habits. They have quick and energetic minds. They have a large flow of spirits, great vivacity and cheerfulness, and are remarkably effective and productive in their mental character. It is well known that a very large proportion of various scientific works have originated from France. The science of medicine, with various collateral sciences, is highly indebted to the wakeful genius and indefatigable zeal of French intellect for its advancement.

Professional and literary men should live on simple, nutritious, and regular diet. The less exciting their food, the better; in short, they should observe all the

rules of diet previously laid down. They should by no means use stimulating drinks. Their nervous systems are more severely taxed than many other classes of men. Hence the absolute necessity of economizing the nervous strength ; and, if they would preserve that, they must not suffer their nerves to be artificially and unnaturally excited. They should have wholesome nourishment, and then let nature herself supply her own well-balanced excitement.

Of all excitants in the world, in popular use, tobacco should be avoided. Its effects on mind, though generally unperceived, are great. Its first most deadly blow on physical welfare, is given through the nervous system, which forms the bond of union between the body and the soul. And whatever deadly influence strikes here, affects the mental forces. Men who have long used it, depend on its influence in the performance of every extra mental effort. The greater the mental care or anxiety, the larger the dose of tobacco. And when this narcotic stimulant is wholly gone, their mental powers are in perfect wreck. They can do nothing until this fleshly lust is supplied. Even their religious devotions cannot be performed without it. If we would have mind endure, it must not be goaded up with such unnatural and powerful poisons.

The clergymen of this country, in days prior to the temperance reformation, were accustomed to prepare and preach their sermons under, and in demonstration of ardent spirit. Now, among us, this method is abandoned ; but there is a substitute which answers

precisely the same purpose, and is even better; for when the ardent was used too freely, — which not unfrequently occurred, — the subject would reel under the weight of his accumulated ideas; while the substitute equally inspires the brain, without entirely capsizing it. That substitute may be tea, coffee, or tobacco.

The writer, several years since, was accustomed to have, on entering his study, extreme nervous depression, — sinking of the nervous energies, — insomuch that it was impossible to make any mental effort while in that state; a bowl of tea, therefore, — in accordance with previous habits, — would be ordered; on taking which, the extreme depression would immediately pass away, and a most cheerful and happy flow of spirits would take its place. Under this a sermon could easily be prepared; and on the Sabbath, under the same kind of stimulus, it could be preached. But a little time of such violation of law developed the fearful fact that nervous debility and depression were rapidly increasing — that the more stimulus that was taken, the more must be taken to meet the demand. Hence, the tea was abandoned entirely, and very soon the complaint disappeared, and has returned no more.

This is an illustration only of facts which always will exist in every instance of tea-drinking under similar circumstances, whether they be readily perceived or not. How much better in every case, and especially in that of ministers, that they depend, in all their intellectual labors, on the real, substantial, and

uniform inspiration of nature, than upon the spurious, fitful, debilitating excitement of some foreign stimulant ! How much better that the ministers of Christ, under such solemn and awful responsibilities as the preaching of the Gospel involves, lean on the divine energy of the Holy Ghost, than on the transient energy of some artificial excitement ; — nay, how profane and wicked is such a departure from nature and from nature's God !

How can a clergyman advocate temperance in all things, while he himself is intoxicating his brain and nerves with one of the most powerful narcotics which ever grew upon the earth ? How can he plead that men should deny themselves of all ungodly lusts, — “ abstain from fleshly lusts which war against the soul,” — while he is indulging a lust which is emphatically “ earthly, sensual, devilish ” ? How would Paul, and Peter, and John, have looked in primitive times, preaching with a plug or a cigar of tobacco in their mouths ? How would they have looked, and the whole primitive church, spending individually from fifteen to thirty dollars annually of their stinted income for such gross indecencies — for indulgences which destroy the body, blunt mental activity, and resist the Holy Ghost ? Such doings would have scandalized the name of Christianity ; and the fact that the church in the United States is now consuming annually \$5,000,000 for such gross idolatry, is a living, burning scandal on modern Zion.

Tobacco has been sometimes foolishly advised for a

medicine, in that popular clerical disease — Bronchitis. But in this, as in all other cases recommended for the mouth, it is injudicious. Instead of preventing or curing this malady, it often creates or encourages it. If ministers would stand erect while speaking, instead of doubling over the vocal avenue to read their prosy sermons — if they would preach in an off-hand, apostolic style. — a style not only preventive of bronchitis, but more effective on those whom they address, — they would prevent many a lame throat. Tying up the neck and face with extra cravats and shawls, is another fruitful source of bronchial affections.

The injurious effects of tea, coffee, and tobacco, cannot be counteracted by the habits of professional men, as much as by the habits of the laboring classes. They must either abandon them altogether, or bow down as slaves to appetite, and take the consequences. They must abandon them, or consent to have less health of body and mind, and die sooner. See the shallow complexion and trembling hand of the barrister, especially as he advances in life, who, instead of living naturally, has lived artificially all his days, — will he continue to barter his highest earthly good for such pottage? He may live to old age, and so may the drunkard; but, after all, he will die of gradual suicide. He would have lived longer and better without those artificial promptings which wear out the vital principle.

## TO LABORING MEN.

If working men would endure long and accomplish much, they must work temperately and live rightly. Some men work too hard, and by this means violate a law of their physical nature. This is poor economy. Though for a day a man accomplish more, yet, in the end, he is certainly a loser. But temperate labor is both healthy and curative in its effects on the animal system. If the hosts of dyspeptics and consumptives could turn farmers, they might dispense with drugs and doctors, and recover their health. But even farmers themselves may utterly destroy their health and constitutions by excessive and ill-managed labor. To subject one's self to a severity of labor which the strength and constitution cannot endure, is a violation of physical law, which, sooner or later, will bring in its train a penalty apportioned to the amount of transgression.

Another way in which labor may be made injurious, is by inattention to the laws of digestion. Take the case of the farmer for an illustration. Though the amount of daily labor performed by him is not sufficient of itself to injure him, yet, by ignorance or disregard of the nature of the digestive process, he may do himself great injury. One way of injuring himself may be by rapid eating, so that his food is no more than half masticated and half mixed with saliva. That food can comparatively do him but very little good. Or, if he take sufficient time to eat, and then imme-

diate set himself about hard labor, the process of digestion in the stomach becomes deranged and imperfect.

Hence, his system is not nourished and sustained, or else he is obliged to overload his stomach with food in order to get sufficient support. But let him take ample time for eating, and then spend one hour on light matters before he shall put himself down to severe labor, and he will soon find himself a gainer in health, and in the amount of labor ultimately performed. Take the farmer, with his dozen hands, in haying-time, it may be. They hurry down a heavy dinner, then go out immediately to mowing grass or pitching hay. While all their nervous energies are needed in the digestive process, they are forcing them away from their duty to the muscular system. The men and their work move heavily, and at the close of day they feel exhausted and overdone.

Let this same farmer, with his men, change his course ; they eat deliberately, they spend one hour in doing some light matter, and then apply themselves closely to work until the next meal. In this way they give time to masticate, time for the stomach to act, and then they work with ease, and despatch their task with much greater energy and speed ; and at the close of the day they find themselves much less exhausted. Every man who knows how to manage beasts of burden, and studies economy, takes the same course with them which is here recommended for laboring men. When men or horses live and labor in

this way, they ordinarily eat less, are in better condition, do more work, and endure longer. No man of common sense will push his horse to severe draft or travelling, immediately after a full meal. Let him consider his own body worth as much as that of his horse.

Laboring men should also eat temperately. They are under no necessity for using animal food, unless they choose it as a mere matter of fancy. They can be amply nourished on vegetable diet, else the provision made for Adam and Eve, before the fall, was a failure. It has already been shown that all the elements of nutrition are contained in the breadstuffs. But whatever they eat should be simple, nourishing, and palatable. If they eat too largely, the stomach is oppressed, and requires a longer time to perform its functions. Some are in the habit of taking luncheons between meals. They often say they want a full stomach to lean over. This is bad philosophy, for reasons which need not here be repeated. If they lunch habitually, of course, when luncheon-time comes, they feel a faintness at the stomach. And so it would be if they were to eat ten times a day. If they habituate themselves to only three meals a day, they will suffer no more, nor even as much. Three meals a day is as much as they can lawfully dispose of; and when they take more, they are obliged to violate an important law of the animal economy. They should be careful that they do not allow their supper to come near bed-time; supper should come in season for digestion.

Then, on rising in the morning, the head and body feel clear and active. Let laboring men adopt these suggestions, and they will find them much to their interest and happiness.

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#### GENERAL DIRECTIONS.

##### ON SLEEPING.

SLEEP is as important to body and mind as food is for the general system. Without it, the health of the most robust would fail, and even life itself in time wither away. Some need more sleep than others, perhaps, under the same circumstances. But those who are destined to labor in body or in mind, need more sleep than those who are not exposed to fatigue.

Laboring men should give themselves ample time for sleep. They should retire to rest about nine or ten o'clock at night. Nine, perhaps, is the best hour, but never, in any ordinary case, should they sit up later than ten. They need, as a general rule, seven or eight hours of sleep; and sleep before midnight is generally considered worth more than sleep for the same length of time after midnight. They should rise in the morning about five o'clock.

Professional, literary, and mercantile men, should give themselves time to rest the mind. They ought never to allow themselves to be awake after ten o'clock at night. Many may suppose that, by laboring over their books, or other business, till eleven or twelve o'clock at night, they gain time and money; but this

is a great mistake. When men undertake to cheat themselves, they always get a bad bargain. Dame Nature is jealous of her rights ; and whoever will be so unwise as to trample them under their feet, will, sooner or later, be made to pay the damages. If we want health and ability to endure, we must obey law, by giving sufficient time, and the right time, for sleep. If any would shorten his time of sleep, let him not put off the hour of retirement, but rise earlier than the ordinary hour in the morning.

Sleep, to be quiet and refreshing, should be on an empty stomach ; that is, the first steps in the process of digestion should be accomplished before retirement. Supper should be the lightest meal of the day, and should be taken at least two hours before bed-time. Some are in the habit of eating fruit after supper, and frequently late in the evening. Strong stomachs may dispose of fruit under such circumstances without apparent injury, but weak ones will suffer more or less from such a course. The better way is not to take anything, even the mildest fruit, after supper. The stomach should be allowed the privilege of rest, as well as the rest of the body. Dreams are generally the result of luncheons and suppers late in the evening. The revelations of night visions are doubtless, in many instances, the result of late suppers, producing involuntary somnambulism.

Another rule, indispensable to good health, is, never to sleep on feather-beds. They are non-conductors of the electrical currents which naturally communicate

between the surface of the body and the atmosphere. They obstruct the passing of gases given off by sensible and insensible perspiration. They check that part of respiration which is naturally carried on through the skin. They retain those gaseous substances given off, and send back upon the body their hurtful agencies. The tendencies of some of these gases are adapted, among other evils, to generate fevers. Owing to the non-conducting quality of these beds, these gases accumulate, and become very detrimental to the system. Another objection to them is, they are the general reservoir of the various exhalations of the different persons who have lodged on them. They retain the effluvia and humors which may have been gathered in this way. Hence, for those who love health more than soft beds, feather-beds should be rejected; and husk, palm-leaf, or hair mattresses, adopted in their place, for all seasons in the year.

#### ON BATHING.

Cleanliness is a very important means of health. Some persons in low life, and some foreigners, are practically great lovers of dirt, and at the same time seem to have good health and sound constitutions: but they are none the better for their filthiness. Their good health may be the result alone of their plain living; while those in higher life, with all their cleanliness and ventilation, destroy themselves with their luxuries. But when the cholera and other violent epidemics

appear, their most fearful footsteps are traced in those districts and families where filth abounds.

Every person ought to be accustomed to periodical, or, at least, occasional bathing. The pores of the skin are likely to become chocked and impervious, without it. The surface of the body becomes covered with a substance which prevents the action of the cutaneous vessels. Washing the surface from such an accumulation is very important both for the flavor and the health of the body; for, when the skin is thus coated, the whole system is affected by it. The natural exhalations, which are adapted to purify the blood and fluids generally, are thrown back upon the system; then some, or all of the internal organs become oppressed, and cease their healthy functions.

An obstructed skin is frequently produced by a sudden cold, by which the internal system becomes oppressed, and a fever ensues, unless the obstruction be speedily removed. A bath to meet such an emergency is necessary. A warm bath should be chosen when the action of the system is feeble, possessing but little power of reæction; but where the system is more vigorous, promising to reæct so as to bring up a glow of warmth and a gentle perspiration, a cold bath may be preferable.

The kind of water to be used is of some moment. Sea water may be the best for those in general who have been accustomed to the atmosphere of the sea-shore. It may be the best for any whose surface is too cold, lax, and flaccid, throwing off perspiration too

profusely, or that which is clammy and morbid. Sea-bathing, cold or warm, as the individual may be able to bear it, accompanied with dry friction, in such cases may prove very beneficial. A fresh-water bath is unquestionably the best where a fever, or a tendency to a fever exists.

A cold or warm bath should be selected in accordance with circumstances relating to the state of the general constitution, present strength, or the nature of an existing morbid affection. As before remarked, as a general rule, a warm bath may be the better one when the general strength is too feeble to admit of a reaction of the system under the influence of cold water; while a cold one may be better, where a tolerably vigorous habit exists. A cold bath may also be preferable, as a general thing, when resorted to as a luxury, or for the purpose of preserving health. The cold itself is a tonic to the skin, and through the skin to the entire system; while the general tendency of warm water upon the surface is weakening. When a limb is inflamed, we often bathe it in warm water to reduce its action; i. e., to weaken the present excited action of its vessels.

The frequency of bathing is a matter of some interest. This depends much upon the constitution, health, habits, and employment of each individual. Those who live on meats and oily substances have much more occasion for frequent baths than those of different habits. If persons would so regulate their habits of living as to keep the fluids of their systems pure, they

would have much less occasion for frequent bathing. Hence, no specific rule can be given for its use, either as a preservative, restorative, or a luxury; common sense and circumstances must determine its frequency.

Too frequent bathing, however, is decidedly injurious. Although hundreds perhaps suffer for want of it, while even one is injured by its frequency, yet there is such a thing as making too free use of a good thing. A person may bathe so often as materially to weaken himself, in the course of time. Any one must be very filthy to need a bath every day. And if a bath be used every day by one who only needs one once or twice a week, and this course be persisted in for a great length of time, much damage to the system must accrue. Very many, doubtless, have been greatly injured in this way, though that injury may not have been attributed to such a cause.

Too frequent bathing does injury by stimulating the pores of the skin too much. When the skin acts naturally, it constantly throws off, by insensible perspiration or exhalation, a substance which it is necessary the system should part with for the continuance of life and health. When, from any cause, that exhalation is impeded, the system suffers by being oppressed with that which should be thrown off. But if the skin be made too active, it throws off too much,—more than is required, and more than the system can afford to spare: hence the body is gradually weakened. And though years may pass before this undue waste be perceived, yet it will sooner or later discover itself. Not

unfrequently has the writer been called to prescribe for debilitated children, when little else could or needed to be done except to proscribe the use of too frequent baths and washings. Some mothers are so excessively afraid of their little ones being dirty, they will bathe and wash them several times a day. Such a course is liable to be very disastrous, especially when warm water is used. When children are washed for cleanliness, cold water should generally be used ; but even that should not be applied to the whole body so often as every day, if the strength and health of the child be an object.

A letter was received from the much honored John Quincy Adams, a few months prior to his decease, answering some inquiries in relation to his experience on bathing, in which he says he has practised it in a variety of forms and ways, "from first to second childhood," —an "experience during more than threescore years and ten." He says,— "I continued it until within the last four or five years, when I found it no longer agreeing with my health, but operating rather unfavorably to it. Medical friends, and particularly my very ancient friend, the late Dr. Waterhouse, advised me to disuse it; and my experience confirming his admonitions, I have, with great reluctance, entirely renounced it." He adds, — "And I parted from it as from a dear and deeply regretted friend. Though no longer able to enjoy it myself, I can very cheerfully recommend it,—not only the practice of bathing,

but of swimming,—to all my friends under the age when King David could get no heat.”

There can be little doubt but that the fascinating luxury of bathing has sometimes led to such an undue use of it, as gradually to waste the physical energies, and induce premature old age. While the system possesses the vigor of youth and manhood, the too great waste of the body can be supplied by its recreative force so effectually, that the debilitating effect is not noticed; but when that power of recreation becomes much diminished, the loss becomes more permanent and apparent. Let the young be admonished lest this useful luxury be used intemperately. Other cases have come under observation, where bathing had been extensively practised for years, but, as age came on, the system was not able longer to bear the excessive exhalations by insensible perspiration which the practice occasioned. Several persons have confirmed this opinion by relating their own experience.

## ON AMUSEMENTS.

All amusements for recreation should of course be innocent, and free from a tendency to any kind of dissipation. The periods daily allotted to exercise and relaxation may be more or less occupied in amusements; but generally there should be, aside from this, some time occasionally spent exclusively in simple recreations. There should be occasional hunting and fishing excursions, temperance picnics, sleigh-rides, and other pleasure parties and amusements. Occa-

sional plays and games which have no evil tendency, may be made profitable to health. Some may think that such recommendations are giving too great license; but if they are properly chosen and managed, there can be no harm from them, but great good.

These occasional amusements are recommended not for the sake of the mere pleasure they are adapted to give, but purely for the purpose of recreating and preserving a healthy state of body and mind; which cannot always be done without these aids. Those persons especially, who are devoted to constant mental labor, must have resort to some kind of mental relaxation, or their constitutions will suffer loss: the mind cannot bear to be kept constantly on the stretch of exertion; it will soon lose its elasticity and power, and the body give way. Clergymen should be allowed the privilege of such amusements as are essential to health of body and mind. Their labors are very wearing to the powers of life. They should be relieved occasionally from the monotony of mental toil which is constantly pressing on them. A little merriment now and then, short of levity, should not be considered derogatory to the sacredness of their calling. Without this, their systems may too early wear out, and their labors be cut short.

#### ON INDULGENCES.

Under this head it is intended to speak of things which are inexpedient and unlawful. While honest and innocent amusements, used with judgment and

temperance, are very important by way of giving elasticity and strength to the mind and body, unlawful and intemperate indulgences injure and often ruin both. There are amusements which are innocent and harmless in their nature, that may used intemperately and unlawfully. Amusements should be used, not as means of mere pleasure, but of actual utility: and while kept under such a rule, all is well; but the moment they shall be used for the simple gratification they give, they are likely to engross too much of time and thought, and lead to ruinous results. But when persons resort to measures for their gratification which are unlawful when used in any degree, the danger is greatly increased.

Private indulgences claim attention here. Indulgences which belong to married life, when used with moderation, are conducive to health; the married, all other things being equal, enjoy better health and live longer than the single; but when these are allowed in excess, they reduce the vital energies, and diminish the powers of body and mind. All licentiousness, aside from its moral evils and degradation, is destructive to the human system. Many a young man has not only ruined his reputation and moral character, by licentious practices, but has spoiled his constitution for life. He has, early in life, planted in his system the seeds of misery and premature death. One who has early in life given himself to such habits, has unfitted himself for the future enjoyment of domestic happiness. The degradation of

his mind, and the vitiation of his appetite, have made him unfit to become the companion of virtue and refinement, and he is very likely to continue the indulgence of his corrupted passions in after life, whatever may be the sacrifice to his moral and physical character.

Self-indulgence is another degrading, contemptible vice, which has destroyed its thousands and tens of thousands annually, both of males and females. Setting aside a comparison of its sinfulness, it is doing more injury to society than all other forms of licentiousness put together. Boys, and even girls, of respectable origin, of splendid original talents, have, by this unnatural practice, not only destroyed their physical systems, but have reduced their minds to comparative imbecility, and, in many cases, to complete idiotism. It would seem as though, if one were lost to all sense of moral accountability on this subject, the idea of making one's self an idiot, to be a walking monument of self-destruction, would be enough, of itself, to deter the most inveterate devotee to his passions, from such habits.

The bodily diseases produced in this way are frequently very formidable, and baffle the most profound skill. Sometimes they appear in the form of spinal affections, which send distress and wretchedness throughout the whole nervous system. Accompanying this, will often be found a morose disposition, dejection of mind, and melancholy. These affections are common to males and females. And added to

these, there will not unfrequently appear in males, seminal incontinence, wasting away the vital energies, by the excessive and unnatural draft which it makes on the electric forces of the brain and nerves.

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#### MENTAL AFFECTIONS.

THE sympathy existing between the mind and the body is so great, that when one is affected, both are affected. If a person imagine even that he is sick, he is pretty sure to be sick. If, while in health, he be told, and made to believe, that his countenance indicates illness, in a short time his whole system will become affected. Medicines have sometimes been known to produce their specific effect by a mere dread of taking them. Let the imagination be inspired with confidence that a certain medicine, or course of treatment, is going to perform a cure, and the cure is likely to follow. It is on this principle, that simple bread pills have sometimes performed great cures ; and on this principle, doubtless, depends, to a very considerable extent, the success of any practitioner.

#### CHEERFULNESS.

This state of mind has much to do with the healthy action of the physical system. A cheerful and happy mind gives a free and easy circulation in the nervous system ; it aids in the circulation of animal electricity or nervous fluid, which gives support to the vital ener-

gies of the whole body. Cheerfulness, by its effect on the nervous system, contributes much toward a healthy and free circulation of the blood. It has to do, indeed, with the formation of the blood, by virtue of its influence on the process of digestion. A cheerful mind, especially during the hour set apart particularly for the first effort of the stomach after a meal, is very important to an easy, thorough digestive process. If the mind be attacked with grief, the food is not digested as well; and consequently the system is not as well nourished. How commonly does leanness of body follow continued grief! Why this? Because grief hinders the process of nutrition. It does it in two ways: it hinders the thorough digestion of the food, so that nourishment cannot as well be drawn from it, and it retards the action of the absorbent vessels, which take up the nutritive part of the food, and convey it into the blood.

Whatever, then, may be an individual's condition or circumstances in life, it will be great economy for him to make himself cheerful and happy. However bitter may be the cause of his grief, let him cultivate a spirit of resignation; however painful may be his condition in life, let him endeavor to be content with such things as he has; however dark his prospects, let him hope for good. While nothing is gained by despondency, much is lost. While cheerfulness helps others to be healthy and happy, it is of great benefit to one's self.

Some have thought that much cheerfulness was

contrary to true dignity and Christianity. But this is taking a narrow-minded view of things. It is no more a sin nor a breach of dignity to indulge in real cheerfulness, than it is to take wholesome food. There is a distinction to be made between cheerfulness and levity. While levity may be undignified and unchristian, genuine cheerfulness may be a part of dignity and Christianity both. Ministers have been sometimes charged with a want of spirituality, because at some of their *social* meetings they indulge in some degree of merriment; but all this is in keeping with nature's law, and is absolutely essential to health. Their situation and calling ordinarily circumscribe them in relation to sources of amusement, and their responsibilities are adapted to induce solemnity of mind; and if this condition could not now and then be relieved, they could scarcely endure it. If we would be benefited by their ministrations, we must give them a chance to live.

## MELANCHOLY.

This affection of mind has an opposite effect on the general health, to that of cheerfulness. Melancholy deadens the circulation in the blood-vessels and nerves; and also retards the action of the liver. It hinders the process of digestion and of nutrition, and tends to dry up the fluids of the whole system.

A state of despondency and melancholy is a frequent accompaniment of deranged digestive organs. It sometimes is found to be both cause and effect. It

often causes dyspepsia, and whether it cause it or not, it generally follows it; and then operates both as cause and effect. When melancholy, or a despairing state of mind, once exists, whether as connected with deranged digestive organs, or any other state of ill health, the cure becomes very much more difficult and doubtful; and nothing comparatively can be effected by way of medication, for the benefit of the patient, till something be done for the mental affection. Some method must be had at once to attract the attention of the patient away from himself and his complaints. Hence, in selecting a method of cure, some exercise or employment must be chosen, which will interest and engage the thoughts, and prevent their being absorbed in himself; and those associated with him must put on the most cheerful aspect.

#### BENEVOLENCE.

Human sympathy is a quality of our natures which the Creator has implanted in us; and whoever cultivates and exercises it, yields to a law of his social character—obeys a law of his nature; and whoever cherishes a due spirit of obedience to any law of his being, is doing that which is promotive of his health. In willing good to others,—which necessarily involves all practicable benefactions,—there is a pleasurable feeling passes over the mind, which vibrates over the whole body; and this heaven-born vibration of human sympathy and good-will, gives a glow of health to the whole mental and animal system. Hence,

the fact, that in times of the prevalence of pestilential diseases, those who devote themselves to the self-sacrificing effort of nursing and watching the sick and dying, while the victims of the malady are fast falling on their right and left, seldom become a prey to that malignant disease themselves. The great philanthropist, John Howard, could never have endured so long his labors amidst the varied death-damps of prisons and dungeons, and appalling scenes of wretchedness to which he exposed himself, had not the desire and the pleasure of doing good, for the sake of humanity and of God, given to his system unwonted power of resistance to disease and endurance of toil.

He who wills good to his fellow-beings, and, so far as able, gives practical demonstration of his benevolence, is not only relieving the ills of human life in others, but is at the same time contributing largely to his own health of soul and body. The Great Teacher of practical benevolence fully appreciated the personal benefit to be derived from the exercise of a spirit of benevolence, when he said, "It is more blessed to give than to receive." Let those who have never made the experiment, begin at once to yield obedience to this law of their social being, and they will find that in so doing they will receive their reward.

## MALEVOLENCE.

This affection of mind is contrary to every law of our social being. Willing evil to our fellow-beings is contrary to the moral law of God, to the law of human

brotherhood, and the law of our mental constitution. Whoever indulges this spirit, has sunk out of himself as he was constituted by the hand of his Maker, and become a fit subject for the companionship of demons ; where no other feelings than malice and revenge, crimination and recrimination, ever find a dwelling-place. A spirit of revenge for injuries, finds a resting-place only in the bosom of fools ; who defy the right of the Almighty to declare, “ Vengeance is mine—I will repay :” much less will a malicious spirit, without provocation, find a place in his breast in which any of the milk of human kindness dwells.

Whoever indulges this cold, misanthropic temper of mind, chokes the natural current of his soul ; and while that soul is thus constrained, and its social sympathies are becoming dried and withered, the whole physical organization feels its unnatural action, and becomes partaker of its uncommon depravity. This is to be seen in the very countenance. While the face of the benevolent man shines with the lustre of moral and physical health, that of the misanthropist is dejected, downcast, and sullen. Why this difference in the physical conformation of the countenance ? Because the soul acts upon the whole animal economy, and enstamps its own image upon the outward man. One who is versed at all in reading human character, can easily distinguish a benevolent man from one of a malevolent spirit, by the expression of his face.

## OBLIGATIONS TO LAW.

## PHYSICAL OBLIGATIONS.

HE who would enjoy perfect health is obliged to obey organic law; and from this absolute obligation he cannot free himself; for if he transgress physical law, he must endure the infliction of a physical penalty. While the violator of human law may escape the punishment due to his crimes, by keeping them out of sight, or by fleeing from the reach of justice, he who is guilty of transgressing the laws of his own animal economy, cannot escape with impunity — his sin is sure to find him out. Though he may pass on for a while without arrest, yet, sooner or later, he will find himself overtaken, tried before Nature's court, and condemned.

If we stand in the range of the tornado as it sweeps along its course, can we resist its power? When the engine has accumulated a fierce velocity, can we cast ourselves before it with impunity? Can we stand beneath the weight of the spile-driver as it is loosed from its fastenings, and escape the fatal power of the law of gravitation? Can we cast ourselves from the towering precipice, and not be dashed in pieces? Yes, we may do all this, when nature has so changed that we can violate a single law of our physical being and not suffer damage. Yes, we may, when the God of nature shall repeal the laws which he has set to physical life; or when material things shall cease

to be governed by Deity, and be let loose upon the mere contingencies of chance.

The man who, by gradual steps, deviates from the pathway of physical law, may seem to pass on uninjured for a length of time, yet, by and by, he will be sure to feel the rod of punishment. He who disregards dietetic law may not at first discover any injury, or, should he experience suffering, he may not discover the relation of the cause and the effect, yet the consequences of his unlawful course will, sooner or later, follow, and he cannot escape. The man who habitually steeps himself in alcoholic liquor, or the more deadly essence of tobacco, may possibly live to threescore years and ten, and seem to be tolerably well; yet he has made himself liable to fall suddenly dead, in consequence of the unseen fires that have for years been consuming his internal organs. The man who disobeys law in any other way may not now see that his system is injured; yet when some outward cause of disease shall approach him, he is overcome by it, simply because his previous habits have weakened the power of resistance in his constitution.

The standard of general health is probably lower in the United States than in any other civilized portion of the world. The average age is probably less than half what it ought to be. And the standard of health and longevity is constantly degenerating. The physical habits of Americans are more in conflict with natural law, than those of any other civilized nation. The greater part of those who are uncivilized — savage

and heathen — are living in less rebellion against their own physical being than are Americans. Very few die a natural death. The vast majority die of gradual suicide. If the tomb-stones of our grave-yards could bear witness, what would be their testimony? Upon a tomb-stone in New Jersey there is written under the name of a young lady — “Died of thin shoes;” a declaration which might be truthfully written upon many others. Could they generally speak out as plainly, we should find here, “Died of stimulants,” “Died of narcotics,” — and there, “Died of an abused stomach,” — and almost everywhere, “Died of gradual suicide.”

The Author of our being has given to the human constitution a natural period of existence. But when we commit violence on our own vitality, we shorten its duration. We bring on premature old age, or create, by gradual steps, fatal disease. To die of disease is not, as a general rule, the way to die. We should die of age, and not of sickness. We should die as the much-venerated John Quincy Adams died — at his post, in the service of God and humanity, — not of disease, but of age — not because the vital powers had been violated, but because vitality had worn itself out. The men of this generation die by the violence of their own hands. Their lamp of life goes out, not because the oil is exhausted, but because it has become so adulterated by the admixture of foreign and incongruous elements, that it can no longer burn.

If the term of threescore years and ten ought to be

considered the proper average of healthy human life, we have greatly fallen from that standard. At all events, our average of American life is evidently not one-half what it ought to be. It is said — though we have no very definite data on this point — to be a fraction less than twenty-seven years. And it is evidently growing shorter. The dietetic habits of Americans, in some respects, are growing worse and worse. Notwithstanding all temperance light and labors, there is at present an increase of liquor-drinking throughout the land; and tobacco-using is a vice which is becoming more and more deep-rooted and devastating, especially among the young men, and even the boys, of this generation. And unless there shall come a revolution in our American habits, which are forming the basis of physical and moral character, our race will soon come to a physical and moral ruin.

#### MORAL OBLIGATIONS.

Next to our obligations to God, are our obligations to ourselves. If we are in duty bound to treat our Creator right, we are also, next to him, in duty bound to treat ourselves right. This becomes a matter of moral obligation toward him who made us, "whose we are, and whom we ought to serve."

The second table of the moral law, comprehended in this, "Thou shalt love thy neighbor as thyself," implies the preëxistence of the law of self-love; and the law of self-love involves the obligation of self-protection. What right have we to abuse, or even to

neglect ourselves? To do that which will injure our constitution or health, is sinful in the sight of Heaven. To transgress physical law is transgressing God's law; for he is as truly the Author of physical law as he is the Author of the moral law. Whoever, therefore, violates the laws of life and health, sins against God as truly as though he break the ten commandments. Every man is under obligation to obey those laws; and whoever dares violate them will find "the way of transgressors is hard."

The moral sense of community is exceedingly obtuse on this subject. With the great majority, appetite is the only law which governs; and in spite of all that can be said, it will probably, in a great degree, continue to be so: and those who choose to have it so, must bear the consequences. But some may possibly be induced to examine their obligations and responsibilities in the case. Where is the consistency of being governed by principle instead of appetite, in regard to the demands of the moral law, and yet let appetite rule instead of principle in regard to physical law? for, as before stated, when we violate physical law, we do truly violate moral obligation. Whoever will let appetite govern in one thing, is in a fair way to let it govern in all things. Whoever, through appetite, will allow himself to eat too much or too often, is very likely to give license to all other appetites and passions in proportion to their strength and activity.

When men will let moral principle govern their eating and drinking, they will greatly advance their

physical and moral welfare. Every effort made for the physical salvation of community, should be based on moral principle. If the advocates of temperance had always stood on this platform, they would have accomplished vastly more than they now have done. They have made the cause too much a matter of individual and public expediency. Instead of laboring sufficiently to show that every drop of liquor, taken as a luxury, is so much direct and tangible sin against God, their efforts have been to show, more particularly, that, inasmuch as by the general and extensive use made of it, vast damage was done, we were bound, as a matter of expediency, or of moral obligation based upon general expediency, to entirely abandon its use; that although the evils growing out of its use were very great, and, therefore, for the sake of example, we were bound to abandon it, yet it was not so much an evil *per se*; that if there were no danger of an increased appetite, or of injury by example, a little might not be wrong.

When the advocates of reform will plant their feet firmly upon the principle, that drinking a drop of that burning poison is a violation of physical law which God has instituted in our physical being, and therefore a violation of moral obligation to him—laying the axe first at the root of the tree—they will stand where Heaven will give them moral power to move the world. They will then have the lever of Archimedes, with its fulcrum, and the place to stand which he desired, by which to lift the earth from its

base. When men will stand on this foundation, in advocating temperance, they will be likely to maintain consistency in their own habits. They will not bring upon themselves the too just charge of hypocrisy in pleading temperance over a plug of tobacco; of drawing their eloquence from the sensual inspiration of the smoking weed; of pleading abstinence from the weaker bane, and indulging lusts for the stronger poison. No man can preach the Gospel or plead its moral reforms with eloquence, while sinning against God with this idol in his mouth. If he would utter his words with moral force, they must proceed from **A PURE BREATH, AND FROM CLEAN LIPS.**

## PERSONAL OBLIGATIONS.

When conversing with men on the consequences of want of intelligence and practical interest in the laws of physical life, and the importance of waking up to our responsibility in the matter, they will often apologize for their neglect and disregard for the subject during the past, and their indifference and apathy toward any future improvement, by a wholesale, unmeaning condemnation of the conduct of the world on this subject. They say, "We"—meaning all the world—"we know a great deal better than we do—if we were more enlightened, we would not regard it." This subterfuge, miserable as it is, sums up their excuse for a further neglect of the subject. Because the mass of the people are destroying the true basis of their highest earthly interests, they feel justified in

letting themselves and children suffer on, under the penalties of ignorance and neglect of organic law.

If the majority of men were steeping themselves in aleoholic liquors, would this afford a valid reason why my feet should tread the same beaten path? The main question is not, what will the world do in this matter? but, what is our duty and our interest, as single individuals — what will we ourselves do in this case? Will we act in accordance with our highest temporal good, and receive the reward, which is as sure as the promise of salvation to the righteous, or will we recklessly pass on and be punished? These are questions for every man and woman and child to settle according to the law of self-love and self-protection, written upon the tablet of every human soul. If we are suffering the ills of violated law, we suffer for ourselves, — a suffering world cannot relieve a single pain; and if we die, we die for ourselves, and the death of others cannot save us. Will we also, as individuals, attend on the duty of taking care of those whom Heaven has committed to our charge? Or will we say, because the rest of the world take no interest in the welfare of their children, we will also let our own go on in the way of suffering and ruin?

Obedience to the laws of health should be made a matter of individual and personal duty. It is every individual's duty to study the laws of his being and to conform to them. Ignorance or inattention on this subject is sin; and the injurious consequences of such a course make it a case of gradual suicide. The idea

that we may do what we please with ourselves, is not only bad policy, and bad economy, but to do so is positively wrong: it is sin against the Author of our being. And when persons knowingly or wantonly expose themselves to disease and death, by violating the laws of life and health, instead of calling the result a visitation of Providence, it should be called an act of suicide.

If a man chew or smoke tobacco till the electric forces of his nervous system are undermined, or the vital properties of his blood are corrupted, or the secreting energies of his liver and kidneys are destroyed, and he consequently be laid upon a premature dying couch, would his sickness and death be properly considered visitations of Providence? To send a note to church in such a case, as it is the custom to do, if the nature of the case were understood, would be insulting to Heaven. And there are thousands of similar notes offered at church, where the disease that has become the burden of prayer is no more a matter of Providence than is the State-prison for highway robbery, or the hangman's rope for murder.

If a man has gormandized on meats for a series of years, till his blood and flesh are filled with cancerous or scrofulous humor, shall this infliction of penalty be called a Providence? As well might we call delirium tremens a dispensation of Heaven for the sanctification of the soul. If men will sin against themselves, they must meet the punishment made due by the laws of their own organization. If they will rebel against

nature, they must abide the righteous decisions of nature's court ; and from these decisions there is no appeal. The Almighty himself, without a miracle, cannot save a man from burning his flesh when it comes in contact with living fire. If he would trust in Providence to save him from suffering, he must himself keep within the limits of divine law written on the human constitution.

If the path of duty pass through a region of danger, we may trust in Providence ; but when we recklessly throw ourselves under the ear of Juggernaut, we must be crushed. An American gentleman was suffering severely from ill health. He had consulted the most skilful of American physicians, some of whom told him his sufferings were occasioned by tobacco, and he became himself satisfied that this opinion was correct ; but, unwilling to relinquish this enslaving habit, he went to Paris, France, to take the advice of Dr. Broussais, to see if he could not institute some method of recovery which would allow him to continue this habit. O, what folly ! Why did he not get up a petition,—for a long list of signers could have been obtained,—and send it to the court of Heaven, praying that law, touching this indulgence, might be repealed ? Such a step was the only one which could possibly have afforded the slightest hope ; for, while law remains as it is, the transgressor must suffer.

The laboring man who eats quick and works immediately after, is not only pursuing a course of bad econ-

omy, but is doing wrong to himself and to his Creator. He is diminishing his power and durability for doing good. When a man of intellectual habits neglects to live in accordance with the laws of mind and body, he pursues not only a bad policy, but secures for himself the punishment due to his criminal conduct. The man who lives unnaturally instead of naturally, who allows his system to come under the influence of stimulating drinks, or narcotic and poisonous drugs, does a material and important wrong to himself, and must expect to give account for his criminal conduct on the day of final judgment.

The strange abandonment of principle which characterizes this generation in their treatment of themselves, is almost enough to dishearten the most sanguine hopes of reform. Instead of seeking after a true knowledge of themselves,—the laws which sustain and govern their own animal existence,—and what course of living they ought to adopt to secure for themselves a sound state of health and long life, they foolishly and wickedly inquire, “What shall I eat, and wherewithal shall I enjoy the present hour?”

If we tell the devotee to the alcoholic draught, or the more poisonous and filthy narcotic, tobacco, that his daily potations, or the essences of the deadly weed, are secretly gnawing the tender cords that bind his soul and body together, he heeds us not. He will probably acknowledge the facts in the case, and, at the same time, with most perfect indifference to consequences, and insensibility to personal obligations, will answer,

that he chooses rather to enjoy life while he does live, than to prolong life by curtailing present gratification.

But what is duty — what is right — in the case? Have we a right to prefer present gratification to permanent good? Have we any right to open an artery, and let the blood gradually run away, because we are delighted with the crimson stream? We have just as much right to do this, as we have to use rum, tobacco, tea, coffee, or any other hurtful agent, for mere gratification, against the highest earthly interests of our own life. If we would reach a high attainment in morals or in piety, we must live for it. So, too, if we would have firm and enduring health, we must live for it.

#### SOCIAL OBLIGATIONS.

In addition to our own personal obligations to physical law, we are under high accountability in consequence of our relations to society. We are under obligations to law for the sake of posterity. Parents, and those who may expect to be parents, are called upon to take care of their health and constitution for the sake of generations to come. If parents are of weakly or diseased constitution, the children must suffer, to more or less extent, the consequences. By the unlawful course of parents in regard to themselves, the children suffer disease and premature death.

Parents are also under obligation to teach and oblige their children to conform to physical law for their own sakes. The mother who suffers her children to eat irregularly, or violate the laws of their systems

in any other way, commits a crime against her offspring, against humanity, and against Heaven, for which God will hold her responsible. She commits a crime against the dearest objects of her affections the evil consequences of which, time may never be able wholly to remove, and eternity alone reveal to her understanding. How strange and unaccountable, that mothers should love their children so tenderly as to indulge them in what they have occasion to know may injure their constitutions and impair their happiness for life! May many children be delivered from such mothers, and from such cruel kindnesses!

The managers and teachers of schools and literary institutions are under obligations to secure such facilities for exercise and regulations in regard to the observance of dietetic law, as are adapted to preserve the health, promote the literary progress, and secure to the world the usefulness of their pupils. And students owe it to the world that they so walk in obedience to law, as to render their existence and advantages a blessing to society.

Professional men cannot disregard the laws of their own health, without infringing upon their obligations to community whom they serve. If their services are required, they are bound to make the most of their ability to meet the demand. The labors of any professional man, engaged in the active business of his calling, whether he be a clergyman, a physician or a lawyer, make a severe draft upon the nervous system,

which will require all the strength that it can possibly command.

Working men have a responsibility in this matter. Those who employ laborers are in duty bound, not only for their own interests, but for the interests of those who serve them, so to regulate the hours of each day's labor, as to give their men a chance to live, enjoy the blessings of life, and sustain those who may fall into their charge. Those who are employed to labor, are under obligation to live in such a manner as to make themselves of service to their employers, and meet the demands of society at large.

All who desire the welfare and improvement of society, are under obligation to exert an influence over others on this subject, by example and precept. No man can live entirely isolated from his fellow-beings: his influence by word or deed is constantly telling pro or con the well-being of the world. Let him see to it that it be such, touching this matter, as shall make mankind the better and the happier for his having lived in it. Let him be at least a drop in the bucket of that great wheel which moves the vast machinery of human improvement in its onward course.

## HEALTHY REPRODUCTION OF HUMAN LIFE.

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THE attention of the public has of late been called to this subject, and a considerable amount of information, in the form of books and lectures, has been disseminated. And certainly that must be a very fastidious taste and a narrow mind which would object to giving to the people, in a judicious style, such a practical knowledge of themselves as is essential to the healthy reproduction of the species. Who should not know enough of the natural origin of human life to perceive his own obligations respecting it, and to be able to see in what way he is liable to be a curse, or in what way a blessing, to his own immediate posterity, and to generations to come?

All information, however, given on this subject for mere mercenary purposes, or to pamper an idle and vicious curiosity, should be most sternly repudiated. Nor is it best, even for laudable intentions, to go further into detail on these delicate matters, than is really necessary for the practical purposes of life. But so far as these do require information to be given, all whimpering delicacy and superfluous niceness should

be looked out of countenance by the firm and steadfast eye of common sense. Let every individual so investigate and know himself, as to be able in this matter to discharge his responsibilities to humanity and to God.

#### PATERNAL PRINCIPLE.

This consists in the germinating element, which contains probably the entire infinitesimal rudiment of the future being. This germ, when examined by the aid of the microscope, is found to contain animalcula. Their form bears a striking resemblance to the human brain and spinal column. Those which proceed from a robust constitution manifest great vital energy; while those from a constitution of an opposite kind exhibit an opposite character. In conjunction with its appropriate and tributary maternal element, this germ ultimately becomes developed into perfectly organized vitality.

This germinating principle has its origin unquestionably in the brain and nervous system, particularly that portion of the brain called cerebellum. To this part belongs the organ of amativeness, on the existence of which the propagation of the species depends. On the healthy development and action of this organ, under the balancing and regulating power of intellect and moral sentiment, together with the vital qualities of a sound physical system, depend, in a very large degree, the physical and mental force which shall belong to the future offspring.

Let it be remembered, the vital energy of the ani-

malevolence depends on the healthy nervous forces of the paternal system. Numerous experiments of learned physiologists show this statement to be correct. The legitimate conclusion, therefore, must inevitably be, that the innate constitution of the offspring must bear an immediate and necessary relation to the vital power of that system from which the germ proceeds.

In proof that the brain and nerves have a direct and positive agency in this matter, it is a well-attested fact, that in all cases of excess of amative indulgence, — a condition most injurious to the parent and the offspring, — there is found a peculiar and enervating sensation in the head, especially in the region of the cerebellum, accompanied with a degree of general nervous prostration. In some instances there will be a periodical or protracted headache, which can only be removed when the cause ceases to be, and the immediate effects have passed away. That the quality of the paternal system, especially the brain and nerves, determines the character of the offspring, is, therefore, a tangible matter of fact.

## PATERNAL RESPONSIBILITY.

In view of these facts just adduced, the responsibilities which fall on those who are now liable, or may at some future period become liable, to be fathers, are incalculable. That man who practically disregards his obligations touching this matter, is not fit for the society of intelligent beings. While he lives as he

lists, following out his depraved and self-created appetites, regardless of his obligations to himself, his generation, and his God, he is only fit to herd among swine and grovel in the mire of his own sensuality. We see that the rudiment of the future being is of paternal origin, and that the quality of constitution possessed by the parent determines, in a great degree, the character of that future being. Hence the conclusion is legitimate, that inattention to such responsibilities is in a high degree reprehensible, and even criminal in the sight of Heaven.

Any departure from strict obedience to nature's laws tends to weaken the system. And any process which, in any degree, produces this result, proportionably disables an individual for meeting his obligations to his race. The man who uses alcoholic liquor, is steeping his brain and nerves in that poison. He is taking one of the most deadly enemies to human life into the very citadel of his being. His brain, from whence the germ of a future being proceeds, is steaming and fuming by the alcoholic fires which he has there kindled. Can this man suppose that he can take his daily, or even occasional dram, and his children escape the consequences? Ay, they cannot escape. As a general rule,—which may have exceptions,—there will be found physical or moral defects, and perhaps both, in their character.

A case in proof is at hand: a father of nine children became by degrees a confirmed drunkard. When first married, and until after his fourth child was born,

he remained temperate: but, being unfortunate in business, he suddenly became, and continued, addicted to his cups, during which time his other five children were born. One of these was convicted of robbery, and served an apprenticeship in the State-prison; another of theft; another of larceny; another, of slender constitution, became a drunkard; the fifth was an idiot. The mother of all these was an excellent woman, and her first four children were intelligent and upright. These facts are not alone; there are many cases of a similar character which testify to the same general truth.

That man who chews and smokes his tobacco, is the individual to be addressed on this subject. He is doing that to himself which should be called gradual suicide; and that for his future offspring which should be denominated manslaughter. It is to him that truth would direct her finger, saying, "Thou art the man!" His brain and nerves are tinctured with that foul and loathsome thing. Its first deadly blow is felt in the nervous system. Its essences are carried into, and are corrupting the blood, and flesh, and all the solid substance of the body. He is daily taking into his system an amount of the real essence of that wretched poison sufficient to destroy at once the lives of two or three men whose native sensibilities had never been deadened by its narcotic power. His nervous susceptibilities to its immediate effects are blunted; but the genuine poison, which, under other circumstances, would kill him, and many others with him, is never-

sheless, lodged daily in his system and must sooner or later cause him and his posterity to pay the penalty of violated law.

And where, principally, has this poison lodged itself? On the brain and nerves. It is through this medium making gradual inroads upon his own physical and mental systems, and those of his immediate posterity. His brain, which is to give origin to other beings, is saturated with the poison. A poison, too, which affects not only his brain and nerves, but every gland, every membrane, and every tissue of his body. His children cannot escape being sharers in its hurtful agency. In view of this undeniable fact, will our young men, for fashion's sake, or for a depraved, unnatural appetite's sake, continue this wicked gratification? Will they, in spite of consequences, and in defiance of solemn obligation, go on, puffing their cigars, or chewing the deadly weed? Do they lack for moral courage to face and defend themselves against that created, depraved, and infernal appetite? Are they beyond the reach of recovery — drawn down the current of an enslaving and overpowering propensity? Do they give it up? — or has tobacco so deadened their moral sensibilities — which it is capable of doing — that they can look upon this whole subject with a dogged indifference?

People are apt to think that because a certain habit — which they perhaps in theory admit to be bad — does not immediately destroy life, or make them invalids, they are getting no harm, and are under no

obligation to change their course. They judge of their obligations to physical law, as they do of their obligations to moral law; that because judgment against an evil-doer is not executed speedily, they may sin on with impunity. But punishment for violated physical law will sooner or later come; and if they who offend could bear the rod alone, their crime against nature's government would seem to be of less consequence. But when we know that their innocent offspring must bear a share in the punishment due to their parents, their offence seems to swell to a tenfold magnitude.

Tobacco is one of the most deadly narcotics found upon the list of poisons. A very few drops of its condensed properties will destroy life. Indeed, a single drop of its nicotine oil will kill the stoutest dog. It is sometimes used as a medicine, though rarely, in extreme cases, where nothing else will meet the indications in the case. When used, it is generally given by injection, in cases of lock-jaw, convulsions, and so on; but is never given by those who understand its properties, but with the utmost caution. A little imprudence might prove fatal. It should never be used as a medicine except by a judicious physician, even by external application; for so powerful are its poisonous qualities, that a small quantity laid upon the skin may prove fatal by mere absorption. If any doubt can be indulged in regard to its power, let any one who has never used it, chew a small piece, and the genuine effect of the article will soon manifest itself. And though the habitual use of it stupefies the nervous

susceptibilities, yet the real power of the article is daily absorbed into the system, and is doing by degrees, and perhaps by imperceptible progress, its deadly work. And now returns the momentous question, in view of all the consequences, shall this demon-idol be longer worshipped, or trodden under foot?

All forms of licentiousness are destructive; not only to those who indulge it, but those who may have the sad misfortune to inherit its poisonous fruits. This vice prostrates the whole nervous system, and is destructive to the right quality of that principle which becomes the origin of life. If those who have ruined their constitutions by habits of this kind should ever become fathers, their children will probably give them sufficient proof that such a paternal relationship is never to be coveted. Another vile and vicious habit, no less ruinous to posterity, is self-indulgence. This secret sin is all but ruining the whole race. It often begins very early in life, and continues till its work of destruction has so enfeebled the reproductive power, as to render marriage inexpedient, and even improper.

Any course of conduct, or habit of living, which tends to lower the standard of nervous strength, or to vitiate the fluids of the system, is deleterious to the constitution of the offspring. Large eaters of meats will transmit a portion of the morbid influences which their habit of living has given to their own bodies, and these influences may pass on into the third and fourth generation. Every one, therefore, who ever expects to become a parent, should obey his own physical laws in

all things, not merely for himself, but for the sake of his immediate posterity.

Mental health, also, is essential to healthy reproduction. Great mental exertion and application—that which tends, temporarily, to diminish the animal force of amative feeling—is injurious for the time being to the reproductive power. This may account for the fact—in part at least—that great men seldom leave sons who are able to fill the places of their fathers. The talent of the child may not so much depend upon the degree of talent possessed by the parent, as upon the immediate equilibrity of his physical, mental, and moral forces. A healthy physical system, with well-balanced brain and nerves, and a well-cultivated moral and intellectual character, make up, then, the great leading qualifications to meet our responsibilities touching this subject.

There is another idea connected with this subject which may be important. There should be, in all cases, particularly in men of studious habits, a sufficiency of mental exhilaration, as well as bodily exercise, to maintain an equilibrium of nervous circulation. The clerical profession are in special need of care touching this matter. Their calling involves the general idea, especially in the mind of a scrutinizing community, of great and uniform sedateness of deportment. Hence, partly from the nature of their calling, and partly from the expectations of the people, they are accustomed to suppress that natural buoyancy of spirit, and that letting off of the electricity of mirth.

fulness, which are common to all persons, and which, for health's sake, should, in some proper way, find opportunity to vent itself.

This suppression of nature's promptings must cause a kind of continual or occasional desire for mirth, which is kept pent up in the cloisters of the soul. It is the same feeling in kind which the boy felt, and could not suppress, when, by spontaneous impulse, he whistled aloud during the hours of school. Being asked, "Did you whistle, John?" he promptly answered in the negative. "George, did not John whistle?" "Yes, sir." "John, how is that—did you not whistle?" "No, sir—it whistled itself." This same kind of would-if-it-could feeling must inevitably exist within those who are comparatively deprived of the privilege of sufficient mental recreation. This may very philosophically account for that proverbial saying, which certainly has some foundation in fact, that the sons of clergymen are the greatest rogues. They have this same would-if-it-could disposition inborn in their mental constitutions, derived from the father. This feeling, finding no proper vent in him, was transmitted to the child. This, with the too rigid discipline often applied, may correctly account for this peculiarity in this class of persons.

#### MATERNAL PRINCIPLE.

This consists in what is called the ovum, or egg, which bears a close resemblance in character to that of the oviparous or egg-bearing animals. This is the

natural element for the reception of the primary principle or germ which is of paternal origin. It is located, not in the interior, as is generally supposed, but is on the exterior, upper, and lateral part of the uterus. The regular lunar period prepares the ovum, as well as the rest of the uterine system, for impregnation ; and, as a general rule,—a rule with but few exceptions, if any,—it will not receive that impression after about eight days from the finishing of that period. When about eight days have expired since the closing of this lunar preparation, the ovum loses its susceptibility to impregnate, till another lunar period shall arrive.

The whole course of the reproductive process, after impregnation, is, in many of its essential features, analogous to that of oviparous reproduction. Soon after this process is formed, the ovum changes its location from the exterior to the interior of the uterus, where it undergoes a full foetal development. The uterine system is concerned in the nutrition and perfection of the foetus until it is brought to the birth ; and great care should be taken that nothing, at any stage of early life, shall transpire to derange its functionary powers, and disable it for the purposes for which it was originally designed.

The uterine system is liable to derangements of various kinds. One is displacement. This may be brought about by severe lifting ; jumping, and striking hard upon the feet ; long-protracted standing ; severe exercise in jumping rope ; severe exercise in dancing,

tight lacing ; weight of skirts, and other causes. Any cause, too, which tends to weaken the general system will greatly promote this derangement. Irregularities of lunar periods often become matters of serious moment. Where daughters have been brought up under proper physical training,—if their discipline in respect to diet, open air, exercise, and other things, has been what it should be,—there will be little difficulty of this kind. But if parents have been guilty of neglecting these obligations; have brought up their daughters too delicately, have not given sufficient attention to the development of their physical powers, or have allowed them to have irregular habits of diet, by which their digestive apparatus has become disordered, serious results of this kind may follow. If they have not given them precautions against such causes as sudden colds, exposure of the feet by thin shoes, long-continued cold feet, close dressing, costive bowels, and other hurtful influences, they may find occasion for repentance when it is too late to make amends.

Mothers often suffer from being brought under the burden of pregnancy too soon after marriage — before they have become sufficiently acquainted with the changes incident to married life, new associates, new duties, and new cares. The thousand ill feelings which generally attend the bearing of the first child, are too early thrown upon them, and they become oppressed, discouraged, and heart-sick. And their real ills are magnified in their own mind, till they give up in utter despondency ; and this desponding feeling is

often so impressed upon the spirit of the child, as to give to it a distinct feature of character, perhaps for life.

Again: mothers often suffer from being overtired with bearing too many children — more than the constitution can endure. The idea that the Creator requires a mother to have as many children as can be begotten, is insulting to common sense. We might as well say that no one law of nature should ever be modified by any other law of nature, or have its productive forces limited. We might as well argue that inasmuch as vinous fermentation was a natural process, therefore it was our duty to put all the materials together which were capable of producing alcohol, into such contact that this chemical result should be realized. The truth is, a law of nature may be misapplied, and bad ends accomplished. When we see a natural law likely to apply its force too far, it is due that we repress its course, or avail ourselves of some other natural law which is able to modify its bearings.

It is right that we indulge the promptings of nature in the use of delicious fruits, when such indulgence will not do any violence to other laws of life and health; but when appetite is likely to infringe on other physical laws, it must be repressed until its indulgence will be in harmony with other departments of our nature. Married life is a dictate of nature instituted by Heaven,—a means of health and longevity, — but its sole object is not the producing of children. This is only one object; and no parents should have

more children than they are able, by divine counsel and aid, to bring up for the service of God and humanity ; they should have no more children than the strength and constitution of the mother are able to bear. If she be overtaxed in this respect, she is driven to needless suffering herself, brings her offspring into life to bear inherited ills, and sends out into the world perhaps half a score of children unfitted, through her inability to train them, to answer any good end in life ; whereas, if she had only borne a few, she could have saved her own and her children's health, and, by the blessing of Heaven, prepared them for usefulness.

Although the Creator has made a law adapted to the continuance of the human species, he has appended to it some limitations, and exceptional clauses for our instruction and benefit ; and it is right and proper that people who are concerned in them, should know them, and avail themselves of the end for which they were divinely instituted. There is not probably a single medical man, of much experience, who will deny that there are many women, in married life, who ought to be excused altogether from having more children, or from having any at all. And what shall be done ? Shall they divorce themselves from the duties of married life ? Certainly not ; there is a proviso in the natural law of reproduction, which Heaven, for benevolent purposes, has introduced — which arrangement we are not to despise, or exclude from the practical purposes of life.

The fact, therefore, that, as a general rule, no

woman is susceptible of impregnation, after about eight days from finishing her lunar period until another comes, is one which needs to be understood for important practical purposes of life; and all foolish and bigoted fastidiousness against its promulgation should be frowned down by all sensible people; for, if a knowledge of this law of Deity were brought to a general practical bearing, under the dictates of intelligent reason and conscience, the world would be saved from immense physical suffering and moral devastation. Instead of there being so few born who are of any importance to the world or to themselves, compared with the hosts of real and half-blood vagabonds, who are only degrading themselves and mankind, a far larger proportion would be rightly trained and educated, and sent forth to elevate the sinking standard of humanity, and promote the physical, intellectual, and moral redemption of the world.

There is great sympathy between the female mind and her own reproductive system. The offspring, while in its foetal state, receives an imprint from the maternal mind, which, though it may afterward be modified, can never be wholly eradicated. It there receives a mental and moral mould, the great outlines of which can never be obliterated. We go into a family, and find some very different traits of character among the different children. Trace the history of these back to their foetal state, and the influences to which they were then exposed by the immediate operations of the mother's mind, and the causes of these differences will then

appear. While the paternal influences give the first great outlines of character, the immediate maternal influences give the smaller peculiarities.

This sympathy is also manifested in the effects of sudden emotions and particular appetites. Deformities of physical structure are not unfrequently produced by a sudden impression being made on the mother's mind by the unexpected appearance of some frightful or disagreeable object. A case which has come under the observation of the writer, was of this sort. The mother, during her pregnancy,—somewhere about the sixth month,—indulged a great desire for partridge-meat. The husband went in search for the fowl, but finding none, killed a ground-squirrel, and brought it home. She saw him at a distance, thought the partridge was coming, and prepared her cooking apparatus for its reception. She saw no more of her husband till he, with astonishing imprudence, threw the dead animal at her feet. She was shocked at the sight, and sadly disappointed. When the child was born, it presented, in a striking manner, the features of the dead squirrel, as it lay prostrate before her. The arms could never be raised above an angle of forty-five degrees from the body. The hands resembled the animal's claws; the elbow and knee joints were almost immovable, and bent in the opposite way from the natural direction. He lived to ripe manhood, but with the same degree of malformation and disability. Many illustrations of this kind might be adduced, together with cases of mother's marks, in

proof of the great sympathy between the mother's reproductive system and the state of her mind.

## MATERNAL RESPONSIBILITY.

In anticipation of coming responsibilities, every young woman is bound to look well to herself. She can but know that the grand arrangement of nature is that she shall become a mother. Let her also know that her own state of constitution will, in a great degree, be the type of that of her future offspring. The talent, the moral tone, and the physical health of that offspring will very much depend on her. Let her weigh this matter well, and prepare herself to meet approaching obligations. Let her be prepared to give the right stamp of character to that living immortal being that may hereafter be committed to her charge.

She should look well to her physical system. Let her diet and exercise be such as to secure a sound and well-balanced nervous system. Let her strenuously and scrupulously avoid all stimulating drinks and condiments which conflict with nature's laws, and do great mischief to the brain and nerves: that she live naturally, and not artificially. Her avocations or exercise should be such as give expansion and strength to her whole muscular system. Let her take special pains to expand her chest, that her breathing apparatus may be free in the exercise of its vital functions; for without a full chest, she may plant the seeds of consumption in the constitution of her offspring before its birth. She should adopt a

course of living which secures purity of blood. A large proportion of humors are transmitted from generation to generation. Scrofula is a disease which is inborn, through father or mother, in the constitution of thousands. This is chiefly the product of extensive meat-eating in their progenitors. It may be accumulating its forces for two or three generations before its complete development.

Let her look well to the character of her own moral constitution. She should choose dietetic habits which favor moral culture; and which will tend to give a preponderance to the moral sentiment over the animal system. For the sake of her posterity, if for no other purpose, let her make herself an intellectual being. Let her not live for the mere purpose of mercenary and selfish gratifications, but for God and humanity. She should not live to eat, drink, and sleep, but to answer the great purposes of her being.

She should also look well to the character of him who may become her matrimonial associate. Is he an intellectual being, or a mere animal? Has he a good physical system, and has he a soul? Is he a sensual being, living for no other purpose than to fill up the measure of his appetites and passions? Has he corrupted his body and soul by dissolute habits? Are his habits of life adapted to secure to him a sound physical system? for if his course of life is weakening and vitiating his bodily nature, a degree of moral infelicity will be likely to follow in its wake. Is he cultivating a sound nervous system, or is he wantonly

pursuing a course that is diminishing the natural energy of his brain and nerves, which will unfit him to meet his responsibility to his posterity?

She should examine well his temperance habits. Does he appreciate the cause of temperance? if not, there is *prima facie* evidence, in these days of light, of a laxness of moral principle, which endangers moral rectitude. Is he a young man of total abstinence habits? or does he now and then take a pleasurable draft? If so, he is dealing with that which may, sooner or later, "bite like a serpent and sting like an adder." Trust him not. He is gradually stepping forward and onward in that path which has conducted millions to ruin. Think of the unmeasured woes of the drunkard's family; then stand aloof and be excused from such a destiny. Is the number of the pure small? then prefer single blessedness to double misery. Nay; let the young men of this generation know that they must quit their occasional drams, or go forever wifeless. Let them know that the young women of this generation cannot consent to share with them so fearful a responsibility as that of having a family of children whose only inheritance must be the hereditary taint of a drunken father.

Let her see whether there is any other hurtful habit of which he is the slave. If he be free from the corrupting and debasing power of alcohol, is he free from that slower, surer, and more deadly poison, tobacco? Let every young lady who sets any value upon herself, look well to this matter. When she

sees a young man so lacking in the essential qualities of a gentleman that he needs a cigar to finish him, let her be determined that she will prefer the acquaintance of those who do not require this appendage. And let her never suffer herself to be courted by one of corrupted breath and TOBACCONIZED BRAIN. Let her never marry one whose habits will ever annoy her, and whose system is under a poison that is enervating the vital and moral energies of his whole nervous constitution, and that will affect her posterity.

Will any one say this is a matter of fancy and not of facts? How comes it that the general idea that the physical condition of parents has a bearing upon the physical character of children, is universally admitted, and yet there are no individual instances in which it is practically true? The truth is, there are individual instances the world over, and everywhere; but nobody seems to realize it. In every instance where either of the parents' habits are contrary to physical law, they are doing an injury which will be more or less felt in the generations following them.

Let every young woman, and every young man, bring common sense and reason to bear upon this great and momentous subject. Let them so take care of themselves as to be prepared for the sober realities of life. Let them so fulfil their responsibilities, as that, when years shall have passed away, and their family circle is gathered around them, they may not have cause to look back with sorrow upon the past, and with fearful forebodings toward the future. Let

them be so careful in the selection of connubial associates, that they may prove a mutual comfort to each other, and a blessing to the generations yet to come.

Let them beforehand count the cost of indulgence in intemperate appetites and sensual dispositions, which must inevitably tend to enstamped upon their offspring the grossness of their own physical and moral character. Let them not in this way make themselves responsible for the evil conduct of their children, which may bring their gray hairs with sorrow to the grave. But let them, by their physical, moral, and intellectual culture of themselves, be prepared to bring into existence a class of beings whose physical, moral, and intellectual character shall enable them to enjoy life, be an ornament to society, and a blessing to the world.

What shall be said of him who will go on in known hurtful indulgences — feeding unnatural appetites, or crowding his natural ones by unnatural burdens? Shall he be reckoned among intelligent beings — beings endowed with a soul? Inspiration calls that man a fool who seeks *only* worldly good, and neglects his higher destiny. And is a man any less a fool who knows no higher rule of life than the mere gratification of a depraved appetite; indulgence which hazards health and life, and lowers the standard of his intellectual and moral being? In doing this he puts himself on a level with the soulless brute! Nay; he puts himself far below the brute! He cherishes ap-

petites so low, vulgar, and unnatural, that brutes will not stoop to be his associates. Brutes will not sip the drunkard's drink ; they will not chew the tobacco-eater's cud.

How would the ox, or the horse, the dog, or even the swine, degrade his nature, were he to use tobacco — that deadly thing which is working greater physical devastation to this generation than even alcohol itself ! What would a man think to find his horse eating the poisonous stuff ? Would he not be alarmed for its effects on his strength and durability ? — for every one of much intelligence knows it to be injurious to animal life. Let that same man ask himself whether his own body is worth less than that of his beast ; and inasmuch as he has a higher nature, let it be saved from the benumbing influence of the deadly weed.

If he is endowed with reason, let him govern himself ; let him study to understand, and resolve to obey the laws of his being, which are the LAWS OF GOD. Let each one resolve to do what he can to turn back the mighty current of physical and moral declension which now threatens the extinction of the noble qualities of human nature, improve his higher being, and **LIVE FOR GOD AND HUMANITY.**

NATURAL PRINCIPLES OF CURE;  
OR,  
CURE WITHOUT DRUGS.

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AMONG the common people, the wide distinction between Prevention and Cure has not been generally recognized. They are apt to think that all books, relating to the laws of life and health, must of course be treatises on diseases and cures by drugs. They are, at least, often more eager to obtain reading matter in some contemptible quack-doctor book, which professes to teach them how to doctor themselves, than they are to get books to show how they destroy health and life, and how to prevent diseases, broken constitutions, and premature death. They regard CURE infinitely more important than PREVENTION. As a general rule, they more highly value a physician who, instead of warning them against the evils of violated law, will let them go on unmolested till they have ruined themselves, and then will be on hand to drug them thoroughly, even unto death, than they will that man who has the moral courage, in the cause of humanity, to peril his reputation to prevent them from encountering needless suffering and an early grave.

They want their false appetites and ruinous indulgences to be let alone ; and, when health is gone as a consequence, they want a doctor, or doctor book, to prescribe drugs which promise to restore health, in spite of their continuing the indulgence which caused it. Or, if they set aside the cause for a short space, they want to be so thoroughly drugged that Nature may never dare make such another outcry, so that they may return to their sins with hopeful impunity. At all events, they consider health a secondary matter — a matter comparatively of small importance until it is ruined, and then mourn over their pains and sufferings, when it is too late to make amends. They practically consider the old proverb to be obsolete, "An ounce of prevention is worth more than a pound of cure." They go on with their unnatural indulgences, undermining their physical vitality, until Nature, unable to bear abuse any longer, gives signs of woe ; then they resort, perhaps, to cures which only cure by death. The first step toward the cure of diseases is effected

#### BY REMOVING CAUSES.

Unless the original cause of any given disease be removed, there is no successful way of obtaining a permanent cure ; and by the removal of the original cause, perhaps in more than nine cases out of ten, Nature will remove the difficulty without the aid of any kind of medicine. It is the most consummate quackery to prescribe medicine to cure a disease, while the cause that produced it is not abandoned. If a

liver complaint, or kidney complaint, or any other glandular derangement shall occur, which has been produced by tobacco, coffee, tea, or any other narcotic or stimulant, it is an outrage on all common sense, as well as science, to prescribe remedies while indulgence in these false luxuries is continued. They must be abandoned, or health given up; and it is folly to inquire which should be relinquished, for they are all hurtful, and should be rejected.

Here comes a lady with prostrated nervous system; and from this arises a diversity of complaints,—dyspepsia in its various forms and its hundreds of attendant sufferings, sick headaches and nervous headaches, with their periodical visits, goneness at the stomach and palpitation of the heart;—any and all of these, and many more, have grown out of the long-continued use of stimulating drinks. Her dear wicked luxuries of coffee and teas,—especially the green teas,—by their intoxicating power on the nerves, have gradually and imperceptibly worn out their healthy tone; they are now in a morbid and irritable state, laying a broad foundation for ill health in a variety of forms. If liver is the point to which her illegal living has directed its force, and her immediate sufferings arise from a torpid condition of that gland, accompanied with its usual attendant, a sluggish condition of bowels, she runs after some nostrum in the form of anti-bilious pills, or other quackery. She takes her pills, which force a temporary action that is generally followed by greater prostration of nervous force, giving the liver

greater torpidity, and still continues her luxuries of coffee and tea.

This is like a man's holding his hand in the fire till the skin is removed, calling on the doctor for a salve, while he is still holding his hand in the flame. If he wants the burned skin to be removed and a new one to take its place, he must take the hand out of the fire; he must put away the original cause. When he will do this, Nature will want little help to bring things again to their right bearings. But if he continues the cause, he may tax the skill of the whole medical world, and find no relief. If he will continue to violate law, he must meet the damages. But if he will cease rebelling against Nature, put away his weapons of warfare, desist from destroying her vital forces, and let her have her own way, she will put forth her very best efforts to set everything right. Nature always goes for health; and so zealous is she in her undertakings, and so certain of the best possible issue, that we may rest assured that on her part no pains will be spared, and on our part no risk is run.

As before remarked, probably in nine cases out of ten of all the diseases in the world, especially those of chronic form, when the primary cause is removed, Nature requires no help from medicinal agents, and will perform her work of cure better without than with them. Where medicines are not really needed, they do harm instead of good; for all medicinal agents are unnatural to the laws of healthy life. The philosophy of allopathic cure consists in creating an unnatural

condition of the animal economy, in opposition to the existing one. A morbid condition now exists; another morbid condition is instituted in order to overcome and expel it. And if the medicine succeed in removing it, still Nature must remove the unnatural condition produced by the medicine; and if Nature alone can remove any existing disease by having its cause put away, she will come out better in the end, than she will if two morbid conditions, instead of one, are thrown in her way.

My own department of the medical profession has been, in many instances, deficient in attention to the laws which belong to health. They study Pathology, or the laws which govern diseased life, but do not, as a general rule, direct sufficient attention to laws which govern healthy life. The Homeopaths and Hydropathists give much attention to this subject. If a man comes to them for medical aid, they look into the history of the case. They inquire into his habits of eating and drinking; carefully note all his physical errors, and proscribe everything which is in conflict with the laws of health. In this way they put their patients upon the resources of Nature. While their medicines, to say the least of them, are not drugging the patients to death, they are giving the powers of Nature an opportunity to exert their healing forces; and this fact probably forms the principal basis of their success. Nature gets a chance to put forth healing energies, which drugging has sometimes, nay, often, prevented.

Cases have often come under observation where persons affected with chronic diseases have been taking drugs prescribed by their physician, while at the same time they were indulging unnatural appetites in sufficient degree to account for all the attendant morbid symptoms. Several cases of prostrated health, from the use of tobacco, have fallen under notice, where several members of the faculty have been consulted, each recommending his remedies, but not one of them so much as intimating that tobacco possessed deadly properties. Even those who have noticed its deadly effects at all, have generally only half-condemned the practice, and merely recommended the lessening of the quantity, instead of entire and eternal abstinence from it. The prescribing of medicine to cure a disease which is the product of an unnatural habit unrelinquished, is of all kinds of quackery in the world the most enormous and inexcusable.

More than nineteen twentieths, probably, of all the diseases of which complaint is made, are created, directly or indirectly, by the people who suffer from them; and, as a general rule, if they will cease creating the disturbance, Nature will recover herself better without medicines than with them. A portion of their diseases they create directly, by interference with natural law, without any other agency. Another portion of diseases are created indirectly. There are morbid conditions of the atmosphere, and also contagions, which cannot always be wholly avoided; but, as a very general rule, these would touch us lightly, if at

all, if we would not, by impairing the tone of natural vitality, open the door of the "house we live in," and invite them in. As fearful as are the ravages of the cholera, it is comparatively little to be feared, if we will continually pay obedience to all the laws of organic life. But if we will abuse the powers of our own vitality, we may expect cholera, or any other epidemic or contagious disease, to walk in and take such a possession as may prove fatal.

The great majority of fatal cases of cholera were made so by the intemperance of its victims. Many who used no spirituous liquors, used tobacco. Many who used no tobacco, had destroyed the equilibrium of their electric forces, circulating in the nervous system, by strong teas and coffees. Perhaps they had eaten luncheons and late suppers, or had taken largely of meats and condiments.

If we take such a natural course of habitual living as to secure a healthy and even-balanced circulation of the blood, and especially of the electric currents of the body, we shall be in comparatively little danger from hurtful atmospheric influences. Neither cholera or any other morbid agency can find much chance to prey upon us. But if we derange the functions of our organism, though we may seem to do so with impunity to-day, yet to-morrow other destructive causes may enter with deadly weapons.

Hence we can see, if those who are suffering ill health will read and inform themselves on the natural laws of healthy life, and cease violating them alto-

gether, Nature will generally perform a cure. If we create a majority of all our diseases by intemperate habits, we certainly can quit those habits and let the system recover itself. Seeking for remedies short of this, is the very worst of folly. It is spending time and money to no purpose, and wasting the vital energies by medicines which, when they cannot effect good, are only increasing disease and hastening premature death. If, instead of resorting to drug-shops and quack-doctor books, men would see that all violations of natural law were put away, so that no embarrassment should oppress Nature, they would not only save themselves from a vast waste of money, but from many a ruined constitution and loss of life, which silver and gold cannot replace.

Oh, what consummate fools some people are! If we recommend them a book on the laws of health, they will call it quackery, a catchpenny, or a humbug. Or, if we tell them at the bedside, that all they really need is abstinence from disobedience to some law of health — that they do not need drugs — they will think us ignoramuses, and probably send for some doctor, so destitute of skill or of honesty, that he will abundantly gratify them with medicines. The efforts of an honest man they cannot appreciate; but the man who will furnish them with a doctor book, promising to show them how to cure themselves with medicines — the man who will really humbug for money — they will regard as a benefactor to the race. The man who will make a display of powders and drops which

are only preparing them to drop into the grave, is at once reckoned one of the most skilful doctors of the age.

The man who has not moral courage enough to repel the temptations which such ignorance furnishes, is not fit for the profession. The man who will seek a reputation at the peril of community, has not that degree of honesty which could prepare him for a station of such responsibility. He is obtaining money under false pretences, and even bartering the life that has been intrusted to his hands, for paltry gain. Nay: he is worse than a highway robber and murderer. He meets you not in the bold, frank attitude of his real character, as does the highwayman, letting you understand at once your danger and need of preparation for defence, but comes to you in the meanest hypocrisy; pretending to be devoted to the cause of humanity and the relief of human suffering, while he is willing to let you go on in your course of self-destruction; and then, instead of seeking to show you wherein you have departed from Nature's path, and turn you back into it again, will deal out needless drugs, for money and a reputation, which push you into the grave.

Considering the ignorance of the people and their fondness for drugs — the abundance of quackery and the contingencies attending the administration of all medicinal agents — the increased indifference of the people toward the laws of health because there are plenty of doctors and medicines at hand — it is pretty

safe to conclude, setting aside the benefits of skilful surgery, that the standard of health and longevity would be far above its present position, if no medicines had ever been known in the land, and not a physician had ever set foot upon its soil. The existence of medicines and physicians will probably continue to do more harm than good, until the friends of humanity will take more interest in diffusing among the people a knowledge of the laws of the human system which relate to practical life, and the people themselves shall wake up to their own highest earthly interests in this matter, and those of their rising posterity. Then, and not till then, probably, will doctors and medicines become, on the whole, blessings to community.

The second step toward the cure of disease is effected

#### BY TEMPORARY ABSTINENCE.

As a general rule, keep the stomach in right action, and the whole system will be right. This organ is very much exposed to hurtful influences, some of which cannot always be avoided. Although, as a very general rule,—a rule with few exceptions,—its maladies can be avoided by a knowledge of its peculiar functions and laws, yet it may possibly, by the strictest care, become deranged, and the whole system be put into liability to suffering. Its lining membrane may become coated with a viscid mucous secretion, or its nervous tone may be temporarily prostrated, so that a healthy appetite may be gone, and the whole system brought under some form of fever. If, on the

approach of the disturbance, abstinence from ordinary food be rigidly adhered to for a day or two, the stomach may free itself from its causes of oppression. If, instead of resorting to emetics and cathartics, as is frequently done, the person affected would cease all ordinary eating, and live on mere Indian gruel, till the stomach could have time to clear itself from its mucous coating, or gather up its electric vigor, the whole difficulty might come to an end; a protracted sickness, severe drugging, a large bill, and perhaps a premature grave, might be avoided.

A popular idea exists, that when the stomach gets deranged, the bile has entered it, and must be dislodged. Hence, they will take emetics, throw up bile in the course of vomiting, and thus seem to prove their notions correct. Whereas, the bile rarely comes up hill into the stomach except by the effort of vomiting. The bile they see is brought up from below, from the second stomach, or duodenum, by the severe reverted action of the stomach, calling into its sympathy its associated organs. The stomach would not much better bear bile introduced into it, without vomiting, than it would bear a decoction of tobacco on its first introduction. It would set up rebellion against it, and throw it off with almost as much earnestness, as it would against a solution of tartar emetic.

Whenever the stomach has lost its tone or become oppressed by wrong eating, the only cure that can suffice, consists in temporary abstinence from food. Hundreds and thousands have sick headache, nervous

headache, heartburn, sour stomach, and other ailments which are, if not caused, greatly enhanced by bolting down the food without stopping to masticate it; and the poor foolish sufferers will swallow quarts of pills, neutralizing salts, emetics, syrups, and a host of other things, in hope of cure; — and they make about the same progress that a man would to drink himself drunk every day, and sleep himself sober every night. As long as they will swallow their food whole, they may expect to suffer. When they will cease insulting their stomachs by their swinish eating, they will find by short fasting, that organ to regain its strength.

But fast eating is not the only promoter of gastric disturbance. The taking of condiments with meats is a crime against the stomach. Instead of leaving that organ free to carry on its own vital functions, they throw in pepper and ginger and spice and mustard. All these are as truly destructive to its tone and healthy action, as is alcohol. They produce unnatural excitement, and weaken natural strength. The taking of mustard with meats is a very popular habit, and one that is directly against health. If any one would inquire which he had better take, mustard or pulverized Spanish blistering flies, let him test their strength. Put a poultice of mustard on one arm, and a plaster of flies on the other, and see which can be borne the longest. This test will prove that the use of flies on meats would be less hurtful than the mustard. If these stomach complaints are produced by these unnatural and unnecessary agents, and a cure is desired,

let them dismiss these things at once, and fast until Nature can perform a cure.

Vast disturbance is the direct effect of various stimulants. There are ladies suffering from various forms of dyspepsia and its often accompaniment, consumptive cough, which has been, to say the least, greatly increased by stimulating drinks. They have created great fondness for their favorites, coffee and tea. They love their intoxicating power, as truly as the drunkard loves his liquors, and for precisely the same reason; because they spur up Nature — quicken a mind that is drooping under the reäction of a former excitement

— produce a cheering sensation on the jaded nervous system. Tell them about abandoning such a habit, and, as in the case of the rum or tobacco drunkard, you might sooner succeed in persuading them to abandon the Christian faith. They will be found more firmly wedded to this worldly lust, than they are to a healthy body, a sound mind, or a sanctified heart. An unnatural animal passion rules the day, over better judgment, reason, conscience, and all the higher powers of nature. Health, with all its attendant blessings on the soul, is worth something, but their gratified passion is valued more.

But they cannot have this and health too, after symptoms of suffering show themselves. They must be content to suffer on, or put away their idol appetites. The best cure for periodical or protracted headache, is ceasing to create or foster the complaint. The best drops for consumptive cough consists in dropping

the foolish habits which produce it, or keep it in existence. Let them cease destroying the tone of the nervous system, from which arise a host of complaints, and these complaints will soon disappear. While this portion of our being is kept in tune, there is but little danger of much derangement. But get this out of tune, and there is scarcely any trouble that may not arise. Treat the nervous system right, and Nature will then be able, not only to ward off outward causes, but to cure those which have originated in her own abused and weakened powers. And when medical men in general shall study out primary and original causes, and proscribe them, as carefully as they now study immediate symptoms and the modus operandi of drugs, they may be able to save many a patient which they now hurry into the grave.

When every physician will be as faithful to the true principles on which the profession is nominally based, as was the great surgeon of New Hampshire, Dr. Amos Twitchell, whose memoirs have been published, and with whom it was my pleasure to be acquainted, much of human life will be saved. A man called to bring him grain; saying that it was the last he should be able to bring: he was going with consumption. The Dr. regretted to learn that; and inquired what he would give him to cure him. The man had no confidence in any method of relief, but agreed to try his advice if he would give it. His prescription was the proscription of tobacco. The man had pledged himself to follow the advice or forfeit fifty dollars

Therefore, rather than lose that sum, he quit his tobacco. The next time the Dr. met him, two years, he was well and sound. The putting away of tobacco was the only medicine he took. Many physicians would have said nothing of the tobacco, but if requested, would have poured in the drugs. Where liver complaint, kidney complaint, or any other glandular disease, is the product of tobacco, the question comes, which is to be valued most, a healthy, sound body, or a plug of tobacco.

A case has this moment, while writing, presented itself. A gentleman, with one side of his mouth swelled out with a quid of tobacco, has called and taken advice. The complaint is, turns of colic in the night. The advice given was, take no medicine, but cease drugging with that potent enemy of the sound digestive organs, tobacco. He consented to the advice, and has signed the anti-tobacco pledge. Nightmare is a frequent complaint of tobacco-users. It so paralyzes the nerves of involuntary motion, that the lungs cease to operate, and death during the hours of sleep often ensues. The electric forces cease to circulate, and nightmare, and sometimes death occurs. Palpitation of the heart is another common complaint among tobacco-users, originating in a derangement of the nervous forces. What in these cases must be the mode of cure? Shall we give drugs, or put away drugging?

Every medical man knows what ought to be done, but will he do it? will he search out the predisposing, and, it may be, the exciting cause, and insist on

its removal? It may be he too is guilty of this ungodly practice. The medical professor with whom my profession was studied, was an inveterate taker of snuff. Early in life his lower limbs suffered from partial paralysis. He also had turns of epileptic fits. At length mental imbecility and insanity came on, of which he died. Here were palsy, epilepsy, mental imbecility, and insanity, the evident product of snuff. And what would have been the proper remedy? Abstaining from the cause. Indeed, a disease from any cause is increased by an impaired state of the nervous system. And if we would have Nature seek a cure, we must not only abandon its cause, but abstain from every other violation of her laws, that she may be in the best possible state to war with disease.

In all cases of disease from a humor in the circulating fluids, in order to obtain a cure, there must be abstinence from everything that can have any influence in producing it, or keeping it alive. Every habit which may be guilty in the first degree, or which may aid and abet—everything operating principally or incidentally as a cause,—must be suspended. Meat-eating—especially the eating of fat meats—tends to produce a morbid state of the fluids. And in every case of humor of any kind, meats should be set aside, at least until Nature has had time to cleanse the fluids of the system. If the meats have probably been the original cause, they should be dismissed forever. If they only increase the difficulty, or if they only hinder the restorative energies of the system, they should be

set aside at least a sufficient time to let the system cleanse itself from this morbid condition. A diet principally of breadstuffs, in the simplest form — not by starvation, but in moderation — will greatly facilitate a cure.

A case has just come to mind, which shows the ultimate effect of protracted meat-eating. An elderly gentleman was stopping at the same hotel with me in Nashville, Tennessee, who was being doctored by some quack for cancer. He had a running cancer on his hand, and was suffering immensely with it. He had another coming on his nose, and still another on the other hand. His whole body was saturated with cancerous humor. Inquiry was made, "What has been your habitual diet — have you ate meats largely?" He answered that meat had been almost the only article of his diet from early life; he relished nothing else in comparison with it: could not live without it. My reply was, "You have been an extravagant meat-eater, and here are the consequences; abstinence from flesh-eating can alone give you any permanent relief." This was a true cause of his malady; if not the sole one, it was a sure and important cause of all his cancerous humour.

While in St. Louis, Missouri, a case of swelled and ulcerated leg came under observation. A man fifty years old had one limb greatly swollen and much ulcerated about the ankle. He was a moderate user of alcohol and tobacco, and excessively fond of the fattest of meat — especially fat bacon — it was his living. The

limb had hitherto baffled all medical skill. His physicians had tried their utmost skill at drugs internally and externally ; but no relief was gained. The man was finally induced to quit his rum, and tobacco, and meat : to apply simple cooling lotions to the limb, live on simple, generous, farinaceous diet, and let Nature perform a cure. After a few weeks the limb had put on an aspect decidedly promising a complete cure. In this case the meats had doubtless the far greater agency than any other, in producing this derangement.

All derangements of health which are increased by, or grow out of, an impaired tone of the nervous system, are dependent for cure on abstinence from everything that produces excitement and irritability of that system. In all cases of dyspepsia, periodical headache, palpitation of the heart, nervous prostration, and general debility, there should be total abstinence from all stimulating drinks and irritating condiments. If the coffees, teas, and condiments, which have increased, if not wholly procured the disease, be continued, no cure can, of course, be reasonably or possibly expected.

Indeed, whatever may be the kind of ill health suffered, there should be a careful search made to see whether there are any violations of natural law, directly or indirectly, affecting the nervous system. For in all cases, a single violation will retard, if not prevent a cure. Treat Nature right in all respects, and she will abundantly reward the effort, by her very best exertion to restore and maintain health.

In all cases of mental derangement, the same rule

should be adopted. Depression of spirits and melancholy are greatly increased, if not wholly produced, by unnatural stimulants on the nervous system. Whether produced by them or not, no cure can well be obtained without abstinence from them. Let the nerves be in an undisturbed and healthy condition, and Nature will make successful war against almost any disease that attacks the system, whether it be purely physical, or physico-mental. It has grieved me much to find that, as a general rule, stimulating drinks are allowed the inmates of insane asylums. Insanity is emphatically a disease of the nervous system. Every drop, therefore, of tea or coffee should be strictly prohibited. Cool, nourishing drinks, and simple, generous food, should be the living of those affected with this malady. Abstinence from meat, also, is important. Meats are too stimulating to be used in such cases.

A third step toward the cure of disease is effected

## BY SYSTEMATIC DISCIPLINE.

Lung affections are very much under the control of discipline. A contracted chest, whether hereditary, or produced after birth, is a general precursor and accompaniment of consumption. This difficulty can be greatly, if not entirely, removed. A contracted chest can be expanded. Indeed, we may almost make our own lungs. When the chest is deficient in space, the lungs are compressed and irritated; and they are unable to inspire as much air as is necessary to properly oxydize the blood and prepare it for arterial circulation.

When the blood which comes into the heart from the veins, is thrown from the heart into the lungs, it contains a surplus of carbon—the basis of charcoal. Here it comes in contact with the air inhaled by the lungs, takes a portion of oxygen from the atmosphere, and gives off its excess of carbon. Here, then, the blood, by becoming oxygenized and decarbonized, changes its color; and, returning to the heart, it is carried to every part of the system to supply its nutrition. It is then returned again through the veins, to the heart and lungs. Before entering the heart, however, it meets with the nourishment of our food, carried through the thoracic duct into the circulation. This being added, the blood again enters the heart.

In this way the whole system is furnished with nutrition. The oxygen taken in through the lungs, together with a portion of electricity, is carried and distributed to all parts of the body, to maintain its substance and vitality. Hence the importance of having not only wholesome and well oxygenized air to breathe, but a good full set of lungs to perform the process of breathing. If the chest is contracted, the lungs have not room to expand and receive a sufficient amount of air; and the vital powers become impaired. The blood is returned to the arteries imperfectly oxygenized and electrified, and the whole system suffers. General health becomes impaired, the lungs themselves then often become irritated and inflamed, and death by consumption ensues.

A full chest therefore becomes an important matter.

PLATE XIII. POSITION OF THE CHEST.



NO. 1. POSTURE IN SITTING



NO. 2. POSTURE AT TABLE

(See Appendix, p. 366.)



If the chest is too narrow and flat, a discipline must be gone into, in order to expand it. With proper effort, the chest and the compass of the lungs may be greatly enlarged. In this way consumption may be prevented. Even if it has already reached its premonitory symptoms, it may be averted ; or even in any stage short of ulceration, it can be cured.

The manner of doing this consists first in standing erect. Persons with weak lungs are inclined to bend over their chest, letting the spine curve between the shoulders, till the lungs become flattened and depressed. Let every such person bring his mind immediately to bear upon the consequences of this state of things, and determine to stand erect ; let the front side of his body measure as much from the highest point on the head to his feet, as the back side from the same point. Let him also lay straight in bed ; with shoulders elevated by inclined plane, and head lying on the same line of elevation, with a single pillow. This unvarying erectness of posture will of itself accomplish much in relieving oppressed lungs.

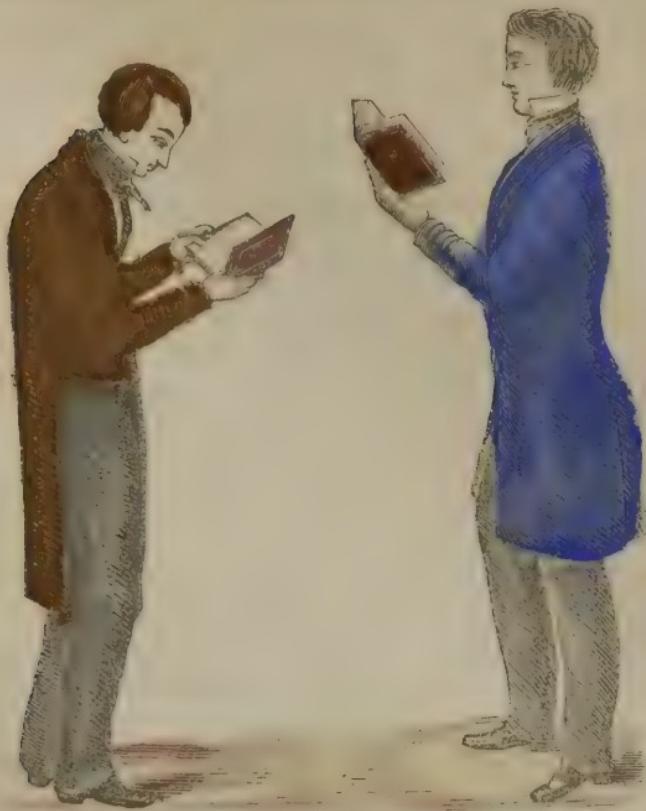
A second step to be taken consists in often inhaling large draughts of air ; distending the lungs as much as practicable. By continued practice the lungs will be made to contain more and more air : the air cells become expanded. This should be done many times a day until relief can be obtained.

A third step consists in repeatedly — many times a day — throwing the arms and shoulders back. This may be aided by weights in the hands — the dumb-

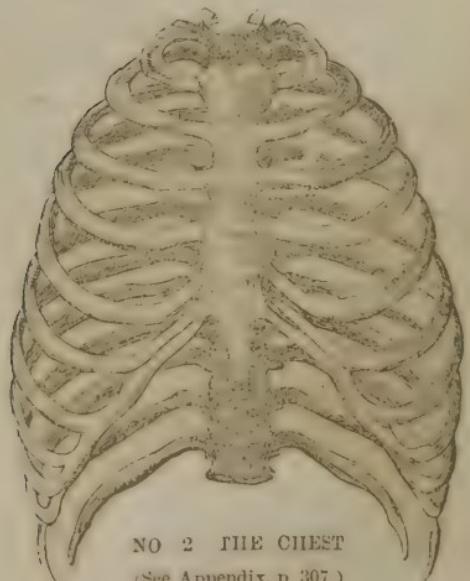
bells, or something equivalent. The shoulders should be kept back, and not permitted to curve round the lungs. If such be the degree of debility that the shoulders cannot be kept back, or in cases of children who cannot remember to do so, put on a shoulder brace. But where Nature is able to sustain herself in this process, she will ultimately do better without a brace, than with it. Those who use them are apt to depend on them, without trying to discipline themselves. If people will bear this matter in mind, and can possibly support the effort, let it be done without a brace : do the same in respect to this, as ought to be done in respect to medicines ; use them as the last resort, where Nature cannot perform her own work alone.

Where a cough exists, this will demand attention. One of the very best cures for cough, is to stop coughing. Instead of allowing it to have full sway, increasing the irritation of the lungs and bronchial tubes, let it be suppressed as far as practicable. This will diminish the irritation of the lining membrane of the bronchial tubes and the substances of the lungs. The less the coughing allowed, the less the inclination to cough. Where this effort cannot succeed, then some resort must be had to palliatives in the form of remedial agents. When this shall be done, let the mildest palliatives be used which are able to give relief, and as few opiates as possible. If a homœopathic medicine will operate, so much the better. In all cases where a cough is the result of consumptive lungs induced by

PLATE XIV. POSITION OF THE BODY.



NO 1 STANDING POSTURE



NO 2 THE CHEST

(See Appendix, p 307.)



dyspepsia — and such cases are not few — the best cough-drops in all the world are made of dropping the habits in which the cause originated.

Another important matter, is living and sleeping in apartments well ventilated. This is important as a means of health, or the relief from any form or kind of disease. Every apartment of a house, and every school-room and public hall, should have a ventilator at the top of the wall. This allows the air in the room to keep itself pure. A portion of the oxygen being taken up by the lungs, and carbon being given off by them, the air becomes devitalized and unfit for being received again into the lungs. This impure air being lighter than healthy air, rises to the top of the room, and will pass off if it can find vent, leaving room for pure air to come in. In this way the lungs are receiving new and healthy air by every inspiration.

For the same reason, no one should sleep without free access to a change of air. The offensive smell of sleeping rooms in the morning is owing to the repeated breathing of the same air, till its vitality has become destroyed, and the impure exhalations from the body pent up in a close room, where the air cannot renovate itself. It is all folly for people to talk of being so feeble that they cannot bear a window open, especially in summer, in the night. Every one can bear air enough to sustain healthy breathing ; and all notions to the contrary are foolish and wicked. In small rooms, a window, or door, or both, should be opened in winter, as well as in summer. If we breathe

the same air twice, it cannot the second time furnish sufficient oxygen for the blood. If people would give heed to these facts, they would prevent and even cure a large proportion of consumptive cases which appear among us. The strength and endurance of the whole system depend, in a very great degree, on the amount of healthy air that is breathed.

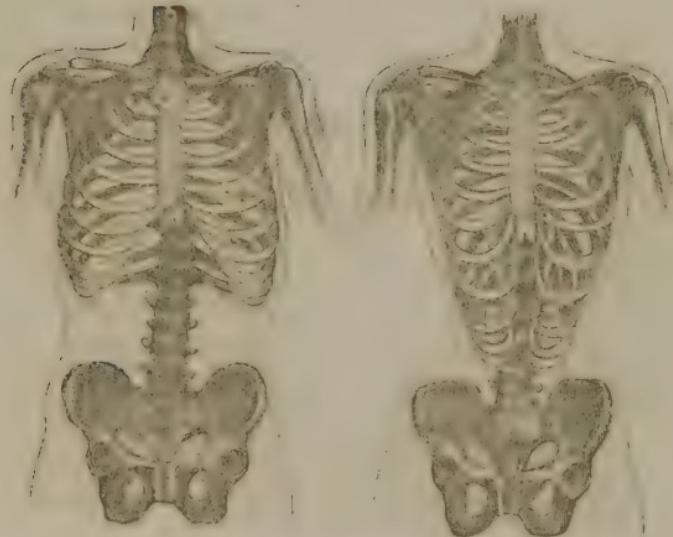
Tight lacing — compressing the lungs with ropes, and boards, and steel — is now nearly abandoned ; but still dresses are made too tight in the waist, and too much filled with whalebone. The chest should have free room to expand itself, and allow the lungs to fill with air. The breathing should meet no resistance from dress.

There is great damage done at the present day to the health of females by hanging under-dresses upon the bowels. This unnatural weight dislocates the bowels and all the other viscera of the abdomen. It drags them downward from their proper location and connection with the stomach, diaphragm and lungs. This leaves a space between these organs which gives a sensation of faintness and sinking at the pit of the stomach, which is often called a "gonesse." This leads often to a bending over of the chest and flattening of the lungs. Other organs also suffer. The liver is pushed downward and rendered torpid. The bile, which is the appropriate stimulus for the bowels, becomes deficient ; the bowels become sluggish and costive ; and the blood is left impure because the bile is not properly taken up, as is shown in the countenance.

PLATE XV. TIGHT LACING.



NO. 1. ON EXTERNAL FORM.



NO. 2. ON INTERNAL FORM.

(See Appendix, p. 309.)



If ladies would have health and a pure, clear skin, they must allow their lungs to receive the air freely, their liver a chance to cleanse the blood, and their bowels an opportunity to clear themselves. Unless they will do this, they cannot long maintain a clear skin and a healthful feeling. Costive bowels alone are ruinous to a healthy body and a cheerful mind. This state of bowels is produced, not only by a sluggish liver, but by the whole viscera being pressed downward upon the lower intestine, and preventing its proper action by mechanical pressure. All other kinds of costiveness can be greatly overcome by discipline in mind and diet; but that which is caused by mechanical pressure cannot be cured till the pressure shall be removed.

The use of physic in such a case would be as unphilosophical as taking an emetic to get rid of tight boots. The bowels and other organs which are fallen down upon the lower bowel, must be pressed upward. Every weight should be removed from them, the dresses suspended from the shoulders, and the bowels repeatedly pressed upward. If their drooping cannot be overcome in this way, a supporter should be worn till their native strength has accumulated. But where costiveness depends alone on the sluggish action of the bowels themselves, it can be overcome by mental discipline. The mind should be brought to bear every morning on their action. They should be brought under the magnetism of thought. Let the mind electrify the bowels till they will move. A regular, sys-

tematic discipline in this way has overcome many a case of obstinate costive habit. A mental determination, persevered in, will sometimes effect that which never can be done with medicine. Indeed, medicines should never be taken for costiveness, if it be possible to do without them. Alteratives only increase the difficulty in the long run, as a general rule.

Another complaint prevalent at the present day among ladies, is depression of the uterus. This may be caused by a weakness in the ligaments which suspend it, or by a falling and pressure, as already described, of the bowels. Where it is produced by the latter cause, the remedy is obvious. Raise the bowels up to their place, and keep them there. When this cannot be done without mechanical support, an abdominal supporter should be used, till Nature shall again be able to support herself; for, without this kind of relief in the case, there can be no cure of this uterine derangement. Here let every young female see how liable she is to incur immense suffering by the weight of heavy skirts hung upon the bowels, and resolve never to run the risk of ruining herself for life in this reckless way. The Bloomer costume is certainly to be commended for one of its characteristics,— all the skirtings are hung upon the body of the dress. This lets the shoulders carry the weight of the whole dress, and the bowels and other organs are left free from pressure.

Where depression of the uterus is owing to debility of the ligaments sustaining it, some means must be resorted to for the restoration of tone. This may gen-

erally be done by giving tone to the muscular system in general; for these difficulties are generally found in those of feeble physical forces. Hence, restoring the general tone of the muscular system will give tone generally to this part. That part of the system which can be exercised with the greatest advantage in these cases, is the arms and chest. Instances have often occurred where females laboring under this form of complaint were so feeble that they were almost, and sometimes quite, unable to walk. Many such have been cured by a process of exercise which only called into exertion the muscles of the arms and chest. By sitting and lifting weights, tossing balls, and such other measures of discipline as were proportioned to their strength, many have been restored to perfect health and soundness.

Millions of females are suffering for want of some vigorous employment of their physical energies. They do not go out enough and exercise in the open air, expand their lungs, and exercise their limbs. The English ladies generally, could almost take one of our puny, pale-faced American ladies in their hand, and carry them through town in their fingers. But walking is not sufficient exercise; it only uses the muscles of the lower limbs. The most important part of the system to be exercised, in any one of sedentary habits, is the arms and chest. An editor once said, "The best board for dyspeptic ladies, is a washboard." This remark contains sound philosophy. They need, not only for dyspepsia, but for the complaints just de-

scribed, as well as others, some vigorous exercise for the muscles of the arms, chest, and abdomen. Raising the tone here, will by sympathy raise the tone in other parts. There ought to be a bowling-alley or gymnasium-hall in every ward of our cities; and our ladies and misses should feel compelled to spend an hour in them each day; till they should put off their dingy white faces, and put on Nature's crimson dye.

A fourth step towards the cure of disease is effected

#### BY REMEDIAL AGENTS.

By the term "remedial agents," it is not intended to say much on the giving of medicines. These, though sometimes necessary, are never to be given where any other practicable method of cure is at hand. If the use of medicine was confined to this rule, drug-shops would be seen retiring from the corners of the streets, and the sick would remain to pay their doctor's bills themselves, instead of leaving the matter to their mourning friends.

WATER is one important remedial agent. This is both a means of prevention and cure. Bathing, to keep the skin right, is treated of in another part of this work. The use of water, as a curative agent, is in some respects quite another matter. The degree of its application for cure, often found necessary, would be exceedingly injudicious in health. It would prostrate the physical forces. It would cause too much matter to be thrown off in a given time. But when the system is full of morbid matter, then the sooner it

is parted with the better. And though the system be somewhat prostrated at first, it will soon gather a more healthy supply.

Water may be used in all feverish actions of the general system, or of parts of it. In general feverishness of the body,—hot, dry skin,—wrapping the patient up in a cold, wet, folded sheet, with a thick dry blanket outside, will soon lessen the fever, moisten the skin by perspiration, and reduce the pulse. Repeating this may entirely break up a fever. So of a local inflammation. While stopping at a hotel, the landlord's little son had his hand badly bruised with the falling of a stone. He came home in great agony; hand badly swollen, and inflammation running high. They were going to put on rum and wormwood, and so on. My prescription was, put on nothing of the kind; wrap up the hand in a wet, folded napkin, and put a flannel outside. In a short time the boy was asleep; and when he waked, his hand was nearly free from pain. The water extracts the extra heat, changes electric action, and opens the pores. This gives the natural functions of the part, or of the whole body to which it may be applied, a chance to equalize and harmonize their action.

For tumors, and general swellings, with inflammation, water is applicable in any stage short of the formation of matter. After matter has formed, then emollient poulticing and lancing become the only means of relief. But if local inflammations are treated right at first, they will generally be subdued without the

formation of an abscess. Pleurisy, inflammation of the lungs, liver, or kidneys, may be cured by this method. Croup in children may be conquered by wrapping up the part affected in water as described. When these diseases can be met in this way, it is infinitely better than resorting to bleeding, purging, and vomiting. This course, in connection with treating the stomach with abstinence, gives Nature a chance to conquer disease, instead of breaking it up by the power of drugs, and leaving Nature, with her enfeebled forces, to throw off the effect of drugs. In conquering disease with drugs, too, we run the risk of destroying the adequate forces of Nature, and making a fatal case.

There are many diseases which originate in the existence of morbid matter in the stomach and bowels. In all cases of illness, the condition of these organs should be a matter of inquiry. Vomiting may sometimes be indicated. If so, this can often be effected, and made sufficient by large draughts of blood-warm water. The bowels may be moved with large injections of cold or warm water, accompanied perhaps by a ~~cold~~ sitting bath, and a large draught of cold water on an empty stomach. Every medical man, with common intelligence in the healing art, knows that there is remedial virtue in the use of water in such and similar cases,—that a good physician must be, in a good degree, a hydropathist.

ELECTRICITY is another means of remedial agency. This wonderful principle in nature is an element in human vitality. Though it may not be called vitality

itself, yet it is so closely related and connected with it, that vital action cannot be maintained without it. Take electricity from the human body, and not a vital function could be performed. Health depends greatly on an equilibrium of action in the electric forces. Many diseases — those which have close connection with the nervous system — seem dependent on a morbid condition of the electric currents of the body. In these cases particularly, if not in all others, electricity, as a remedial agent, may be serviceable. It may render service by furnishing a supply of this fluid where the disease may be attended by a deficiency, or by equalizing its action where its distribution is disturbed by excess.

There are different mediums through which this principle can be applied. One medium is the living human system. This may be called animal electricity, or, as it is now called, Animal Magnetism, or, more recently, Electro-Psychology and Biology. All these terms are used to refer fundamentally to the same thing, but differ in regard to their modes of development. The former relates to influences which are carried to the point of producing the magnetic sleep; the latter, to a degree of the same kind of influence, controlling muscular motion and nervous sensation, while the subject is perfectly conscious and wakeful. In either of these ways, great good may be done; and it would be well if every individual would learn the process by which electricity can be personally applied. Every

father, if not mother, of a family, should be able to practise this art in some degree.

It is not necessary, nor is it best in all cases, to go through the labor of producing the electric sleep. In most cases, where any influence can be gained, that which is able to control motion is sufficient. If all diseased persons could be brought thus far under electric influence, vast good could be accomplished in relieving human suffering. Almost every disease, especially among those of the chronic form, could be cured or essentially relieved. Many cases of the worst form of paralytic affections have been cured in this way. Some cases where the patient had been confined to the bed for many years — some cases of complete paraplegia, or palsy of a part of the body — have been cured as though by charm. It was done by simply supplying the part with a natural current of electricity. So, wherever palsy exists to any extent, there is a deficiency, or a destitution of electric force; and if that force can be supplied, the disease is cured.

Deficiencies in seeing and hearing, where the optic and auditory nerves are at fault, may be relieved or cured by this means. Neuralgia and chronic rheumatism can be treated with great success when their subjects can be brought under electric control. Swollen limbs, stiff joints, and contracted tendons, have borne testimony to the practicability of this kind of relief. Many cases of cure — cures which seemed incredible — could be detailed, if time and space would allow.

Sometimes persons have unconsciously electrified

themselves into a cure. A case under the care of Dr. J. C. Warren illustrates this truth. A lady had a tumor on her neck which the doctor was about to amputate. He called for that purpose; but she had just previously heard that a dead man's hand rubbed upon it would cure it. She plead with the doctor to let her try it. To indulge her, he consented. She obtained the dead hand and applied it. The tumor soon began to diminish, and finally disappeared. What was the philosophy of this cure? Most evidently her mind became so strongly impressed with the certainty of a cure, that it electrified the part so powerfully as to set the absorbents at work, and the tumor was carried off. Warts are often removed in a similar way.

By the same kind of influence, bread pills and other supposed medicinal agents have produced a wonderful effect. While in New Orleans, a French barber wished me to see his wife, who had scarcely left her bed for several days. After due examination of the case, it was found she had had no movement of bowels for nearly a week. The first indication was to get them free. She had procured for herself a monstrous dose of physic, and was about to take it. This was postponed, and a vial was called for, three fourths full of water. Taking a small porte monnaie from my pocket, turning round and rapping its steel edging on the vial, as though making a solution of some powerful ingredient, the vial, after due shaking, was given in charge of the patient, with very specific directions as to its use. The exact number of drops, the precise interval

between doses, the sensations to be expected from it, and the final effect to be produced, were given with emphatic tone and apparent faith. After the time had elapsed which was set for its operation, it was found on inquiry that a full and free evacuation of the bowels had taken place.

Here was a strong impression made upon the patient's mind, with which she had actually electrified her constipated bowels into a free evacuation; and this with no visible agency but fifteen drops, cautiously taken, of cold water. Great good can often be done, in a similar way, through the mind of the patient, in the removal of his disease. This may be called imagination. Very well. When the objector will exactly define what the imagination is, perhaps there will be left no desire for controversy. Let it be called imagination, or anything else. The name does not alter the fact, that mental electricity has produced a new and healthy action in the diseased part on which it was brought to bear.

If all physicians would act on the ECLECTIC principle, selecting valuable facts from all sources — embracing truth for truth's sake — picking it up in the streets, even though fallen from the devil's budget of lies — the healing art would be honored, and the relief of the suffering promoted. But so long as they shall cloak themselves up so closely in their own orthodoxy, as to reject truth, or refuse to examine the merits of a new idea because it did not originate within the limits of

the regular faculty, they will do damage to the profession and the world.

Personal electricity may be used with great advantage without even trying to obtain the electric control, and without producing any specific impression on the mind of the patient. This is done by personal contact with the part affected, and by bringing the forces of the will of the operator to bear upon the removal of the complaint. At the same time, it is well to keep the patient's mind under promise of cure. There is a physician in this city, of quite extensive notoriety in the cure of diseased limbs and stiff joints, who actually performs striking cures in this way. He sits down to the stiff and swollen limb of his patient, and applies downward friction with perseverance and a determination to conquer the difficulty ; and he succeeds where scores of physicians, with ordinary means, have found themselves entirely baffled. Some of the severest cases of rheumatic lameness and neuralgic pains, which have come under my care, have been signally cured in this way.

Personal electricity may be successfully used in removing mental disturbances. A single case may illustrate this. A lady had become attached to a gentleman who had solicited her hand in matrimony ; but, on learning some facts which reflected on his moral character, she decidedly refused his offer. Her mind, in consequence, became seriously depressed, and her health failed. Being promised relief by producing on her the electric sleep, she consented to give it

a test. After producing the sleep, the mind of the operator, accompanied with manipulations, was brought to bear upon her brain and mental feelings. After the first operation, she expressed decided relief; and in a few days, by repeating the effort, her mind and health seemed to be perfectly recovered, and have remained so since.

A case of partial and periodical insanity, which might be related, was cured in the same way. There is no doubt but that a large portion of the inmates of our insane asylums could be cured by this means, provided the electric influence could be produced sufficiently to bring on the electric sleep. Several cases of insanity have been known to be cured, taken in hand in their incipient stages, through the efforts of an acquaintance. An effort should be made to produce this influence, in all cases of ordinary insanity; because, if the sleep can be produced, there remains little doubt of giving relief.

Mechanical and chemical electricity can sometimes be applied with much utility. Electric shocks from the galvanic battery, or from machines which accumulate electricity by friction, made to pass through diseased parts, may restore the equilibrium of electric action, on which alone a healthy action can be based. It is more difficult to bring this electric influence to so perfect a bearing upon diseased parts in this way, as by personal electricity, when such an influence can be produced. Under personal electricity, a well joint or other part may be put into agony of pain by

the will and touch of the operator. So, on the same philosophic principle, a limb or other part under suffering from disease, may be set right. These changes are produced by disturbing the electric forces in one case, and by equalizing them in the other. Where such personal influences cannot be produced, the battery may gradually reach and remove the difficulty. Every practising physician, if not every family, should have an electrifying instrument. The magneto-electric battery is perhaps the most convenient instrument. But in the use of this kind of remedy, a skilful physician should advise.

MEDICINES, if used at all, should be the last resort. If homœopathic remedies can be made to reach the disease,—and as to their efficacy it is not proper for me to speak decidedly, not having given them a sufficient test,—they certainly are to be preferred; for they are sure to produce no unfavorable influence of themselves in any case. They may be insufficient, in some instances, but they poison no one to death. Even if they effect no good, they do no harm of themselves. But this cannot be said of ordinary drugs. If they do not effect good, they do harm. If the morbid influences which they always produce, do not meet and counteract the disease, they add another morbid and injurious influence to that already existing. In general, especially in chronic diseases, everything should be tried which can give any promise of relief, before resorting to medicines. Indeed, as a general rule, drugging in chronic cases is the worst thing that can

be done. If removing causes, proper abstinence, judicious discipline, and other means short of drugs, cannot avail, the patient had better, as a general rule, make up his mind to die honorably, than to drug himself to death. To this, every practitioner of long experience will agree. There is scarcely a tithe of the medicine used now which was formerly given.

In recent and acute diseases, medicines may sometimes be of service. Where they may be needed, far be it from me to lay down rules for persons uneducated in the profession, by which they may hope to practise medicine on themselves. We have quacks enough now, without trying to make all the people turn quack-doctors. Regular physicians do not like to prescribe in any difficult case on themselves or families. Much less let the people turn doctors on themselves and families. In some small matters the people can take, without advice, some simple remedies; but for this they do not need a book. If a child should be in distress from an engorged stomach, they could give a tea of ipecac., or tincture of lobelia; or, what might be better, a large draught of blood-warm water, until vomiting shall give relief.

But when people will study to know the laws of health and prevention with one half the eagerness with which they grasp and devour some infernal quack-doctor book, and will obey those laws,—put away their rebellions against Nature, by which nineteen twentieths of their infirmities originate,—there will be but little sickness left to be prescribed for by

any one. When, too, they use for the few diseases left, all other means of cure, there will be but little room for the use of medicines. But when any one has got into so deep trouble that nothing short of drugs can save him, let him have the best physician that he can find — one that has been well educated in his profession — to sit down by his bedside and prescribe remedies adapted to the case. Let him not try to tamper with himself, for physic is quite sufficiently a “conjectural art” in the hands of the most thoroughly educated men, without being made infinitely more so in untutored hands.

It has been my settled conviction, for many years, as before stated, that there is more damage than good done with medicine; and that, owing to the ignorance of the people, together with their recklessness on matters pertaining to the laws of physical life, their consequent misuse of the medical faculty, and their readiness in embracing all kinds of quackery — considering all this, it has been, for many years, my belief that the standard of health and longevity of our land would now be far above its present position, if there had never been a single physician or a single drug in it. The opinion of Dr. James Johnson, editor of the *Medico' Chirurgical Review*, has strengthened this conviction.

Dr. Johnson says: “I declare my conscientious opinion, formed on long observation and reflection, that if there were not a single physician, surgeon, apothecary, chemist, druggist, or drug, on the face of the

earth, there would be less sickness and less mortality than now. When we reflect that physic is a ‘conjectural art,’ that the best physicians make mistakes, that medicine is administered by hosts of quacks, that it is swallowed by multitudes of people without any professional advice, and that the world would be infinitely more careful of themselves if they were conscious that they had no remedy from drugs,—these, and many other facts, will show that the proposition I have made is more startling than untrue.”

Let it be remembered by all, that of all the cures that can ever be found, there is none that can be so valuable as prevention. Nature is always right in her action, and she always goes for health. Disease is the result of unnatural agencies which generally may be resisted. Let Nature have her own way, and she will generally carry us safely through the voyage of life without wreck or founder, and allow us to die, not of disease, but of age. Notwithstanding the fall, the laws of physical life are perfect; and if obeyed, they will defend us to the last. The fall deranged our moral being, but not directly our physical. Physical nature will operate right, if left to itself. In this fallen world there are various external agencies for whose injurious influences we are not responsible. But if Nature is not interrupted in her course by our own doings, she will always do her best to overcome all obstacles, and maintain a healthy action to the last; and her voice can ever be heard, saying to every intelligent listener, PREVENTION IS BETTER THAN CURE.

THE MORAL BEARINGS  
OF  
ERRONEOUS PHYSICAL APPETITES.

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This is a subject rarely discussed, either by physiologists, philanthropists, or theologians. Yet is it one of vast importance, and ought to draw forth the intellectual and moral energies of those who are devoted to the elevation and salvation of the human race. It is one which ought especially to come from the pulpit, as a part of that Gospel which was instituted for the eternal well-being of men; one which every minister of the Gospel should make familiar to his own mind, and give with clearness and force to the people.

Every Gospel preacher ought evidently so to study the laws of physical life, and their bearings on the soul, that he may be able to speak on this subject correctly; and, by an example of obedience to physical law, to preach it forcibly to his people. He should urge them, by precept and example, to "abstain from fleshly lusts which war against the soul." It has fallen to me, in the Providence of God, to present this subject, during

seven years past, on almost every Sabbath, in different churches throughout the Union. And many have seemed ready to awake from the lethargy of unconscious sensualism, and free themselves from the despotic reign of unnatural animal appetites.'

#### ERRONEOUS APPETITES ON MORAL ACCOUNTABILITY.

Every indulgence of any unnatural appetite produces a morbid state of the physical system. Every indulgence at war with natural instinct, is at war with the healthy condition of every function of organic life. Appetites which the Author of our being never instituted, are so many violations of natural law, which is the law of God; and they secure for the offender, sooner or later to be administered, a certain and unavoidable penalty. Every such violation of law is a sin against physical life, exposing us to physical suffering; and, when it is done consciously, it is a sin against moral obligation toward God, to be met on the day of final judgment. Hence the importance of trying to know the difference between the instinctive attributes of our being, and the destructive lusts which are made by habit; that we may neither be found sinning against our own bodies or the Maker of them.

God, the Creator of our bodies, has arranged the condition of their every fibre and function, and has pledged himself to maintain their right action, unless disturbed by some foreign agency, till age shall wear out the cords that bind us to life. Every law governing the human system is as truly divine in origin, and

character, and authority, as are the teachings of the Bible. And every unnecessary and wanton deviation from obedience to this law, is as certainly a sin, as a violation of Gospel precept. Hence we are as truly under obligation to know and obey the former, as we are the latter. There are instances in which it may be necessary to transgress the laws of health, to answer the demand of some higher obligation, as in cases of illness in the family, where loss of sleep and other privations are unavoidable in the discharge of obvious duty; but when we intelligently violate law for no justifiable end, we commit sin against God, as certainly as though we commit robbery.

All the kingdoms of Nature reveal the law of God; but nowhere is this command "so fearfully and wonderfully made" to speak out to an intelligent mind, as in our own physical structure. Here has Jehovah written his law, not by amanuenses, or inspired men, neither on parchment or on tables of stone; but by his own Almighty finger, upon every living fibre and function of the human body. To needlessly transgress a law of life, is therefore a violation of the law of God; and from the physical punishment of that sin there is no escape and no redemption. No propitiatory sacrifice has been made for this form of transgression. In some way, sooner or later, the suffering must come. Every transgression of physical law, committed consciously or unconsciously, unavoidably or wantonly, will receive the penalty made due in natural law; and, as just stated, if it be one which is committed

under light, and for no worthy object, it becomes not only a sin against ourselves, but a sin against God. The physical penalty may appear in the form of sickness, broken constitution, premature decay and death, or in all these forms conjined. The violation of moral obligation, with all its evils of a moral bearing, must be met when God shall call us to a final account.

Whoever indulges in any unnatural luxury, produces a morbid action in the system, disturbs the equilibrium of organic vitality, and lessens its native vigor and durability. And this disturbing process is generally so insidious in its course, and so unrecognized in its final developments, — for nature will bear abuse silently as long as she can, — that the offender does not perceive the cloud of wrath that is gathering over him till he is pelted by the storm ; and even then he may be so ignorant of the laws of organic life and their penal code, that he knows not wherefore he is punished. He groans under pains and prostration which he cannot account for, and calls it the common lot of mankind, or the providence of God, when it is only the final issue of a long warfare between nature and his own habits.

If a man would seek to live for no higher purpose than his own personal enjoyment, let him know and obey the laws of his own physical being. He who says, "Let me live while I do live," and seeks enjoyment by indulgence in morbid appetites, is committing a mighty mistake. He is practising the very worst kind of humbuggery, deception, and knavery

upon himself. While he expects gain, he experiences loss ; and one which perhaps cannot be measured by any ordinary medium of computation. Whoever expects to gain by stepping out of nature's path—a path which Deity has marked out for him—into one of his own designing, cheats himself egregiously.

He who tries to be wiser than God, makes himself a fool. Nature's path is wide enough for any man's footsteps. And a benevolent Providence has strewed it richly with varied luxuries for his sustenance and enjoyment. Deity has given us natural appetites which, if rightly indulged, will secure physical happiness and longevity. But, if we use those appetites wrongly, or create unnatural ones, and indulge them in any degree, we pervert nature, and take all the responsibility of painful consequences upon ourselves. We contemn the arrangement of Heaven for our welfare and safety, and cast ourselves upon the boisterous sea of life, without compass or rudder, to be tossed, and driven, and dashed upon bars and reefs which stand thick outside of nature's channel.

The Creator has given us these bodies to be our habitation — a dwelling adapted to our highest comfort and welfare. Our individual identity does not consist in the body. The body is not the man. The man is really an invisible being ; and his body is the house in which he lives. The eye is no part of the man ; it is only the window of the house through which he looks out upon the world. The ear is no part of the man ; it is only the earthly medium through which sound is

conveyed to the dweller within. When the house decays, he will live elsewhere. It is now a habitation fitted up by the Creator, of which he should be a faithful steward and tenant, till called hence to give account. But if he wantonly destroy that dwelling, suddenly or gradually, by setting it on fire to enjoy the splendor of the flames, or the grandeur of the lighted clouds of smoke, or by gradually digging away the foundation on which the vital structure is based, he stands charged with the crime of suicide before Heaven, and must answer to it in the day of judgment.

Hence the importance which attaches to a knowledge of the structure and functions of organic life. People comparatively are intelligent upon every subject but this. They know nothing of their habitation, or how to take care of it. They have never even looked in upon many of its apartments, and especially upon those which are the most elevated and important. They seem content with living forever in the very lowest room — the underground, basement story — satisfied with grovelling in mere earthly and sensual things; to the entire neglect of the vacant and unfurnished higher portions of their physical being, built by the Creator for the residence of the soul. They are content with living as menial servants, rather than walk up into a higher apartment, and be the prince of the palace. They choose rather to be the brute portion of human nature, than to rise to the honor of being the soul of humanity, to dwell at a height which is but a little lower than the angels.

Deity has put every man under obligation to his own being to take care of his habitation ; and under bonds to Infinite Benevolence to take care of it for the purpose of his service and glory. His body is not his own ; it belongs to Him who made it. Hence it becomes the duty of every individual, for his own sake, and the sake of God, to inform himself on the laws of organized life, and religiously obey them. It is as truly a duty to read and be informed on this subject, as it is to study the precepts of the Bible. The study of the Bible first, and the study of the laws of life next. There is nowhere to be found so great a cause of human suffering as that of ignorance on this subject. Intelligence is the first step toward improvement. If we shut our eyes to light, for fear of its showing sins which we are unwilling to forsake, our criminality will not diminish. There are, perhaps, none so guilty as those who can see, yet will not see. When we shut our eyes to hide our sins, we not only admit the truth of our criminality, but take a course adapted to harden the heart.

Whoever turns away from light in one case, prepares the way to disregard light in another. Whoever violates moral obligation in one way, prepares himself for violating it in another. If we treat our own highest earthly interests with wantonness, we violate principle, which prepares the way for a transgression of it in any other case where temptation assails. He who will be reckless of his own interests, will be likely to be regardless of those of others. He

who will defraud himself for false gain, will be more likely to cheat others under similar temptations. He who will knowingly murder himself, even by degrees, is more likely to sacrifice the lives of others. Like progress in the commission of crime against society, every violation of principle in eating and drinking blunts the perceptions and admonitions of conscience. He who will smother conscience, because that monitor speaks the truth, to gratify some sensual passion which he knows is ruining himself, will be more likely, from desire of some selfish end, to sacrifice the peace and welfare of others.

As before remarked, it is as truly a sin against Heaven, to violate a law of life, as to break one of the ten commandments. In this statement, no comparison was attempted in the magnitude of crimes. This is a matter which no finite mind can fully measure. Yet, not only is a violation of physiological law as truly a sin as theft or robbery, but some comparison may be made in the magnitude of the two crimes. Let us take the sin of highway robbery on the one hand, and that of — gluttony? — this is considered a sin of no small magnitude; — alcoholic intoxication? this, now, is also considered a notable crime; — tobacco-using, a habit as yet uncriminated by public sentiment, may represent the other side of the antithesis.

A man goes out into the highway, and robs his neighbor to the amount of ten thousand dollars. He violates that law which says, "Thou shalt love thy neighbor as thyself," by taking the money of his neighbor, and

appropriating it to himself. The magnitude of his crime, so far as its outward practical bearings are concerned, amounted to the sum of ten thousand dollars. Let us put this sum upon one page in the account. Upon the other page we will note, so far as practicable, the amount of damage done by the tobacco habit, and see which is the heavier crime. And while this habit is singled out, it is intended to illustrate, in a degree, the criminality of every other vice which enters the enclosure of the soul through the mouth.

The tobacco devotee is every hour of the day undermining his vitality. He is creating a morbid action of his nervous system, increasing the speed of the circulation, adding from fifteen to twenty strokes per minute to the pulse by a single cigar, taking the essence of the weed into the blood, and producing a morbid state of all the fluids and solids of the whole body, and at the same time spitting off that from his mouth which was designed by the Creator, in its pure state, to be carried with the food into the stomach. By this process he is probably cutting off twenty-five per cent. of his natural period of existence. He is cutting off from fifteen to twenty years from his natural life. How much is this to be reckoned in dollars and cents? How much would he give, when laid, conscious of the facts in the case, upon his premature dying bed, to have life continued to its natural terminus? If the sum can be named, we will set it down

How much are his services in the world to be reckoned worth for the same period of time, provided

he is living for some purpose worthy of a man? Then too, while living, he has been constantly diminishing the natural developments of mind and soul, by impairing the body, the only medium through which they speak out to the world. How much is this loss to be reckoned in dollars and cents? He is also carrying morbid influences beyond himself into his posterity. He is not only robbing himself and the world of a part of his natural lifetime, and a part of his energies, but is robbing his own sons and daughters of that which is beyond all price — that which millions of gold cannot buy. For no one can keep up a morbid action in his own person, and that especially which directly assails the nervous system, without transmitting a measure of that morbid influence into his posterity, — an influence which may reach even to the third and fourth generation. There is, indeed, no such thing as describing the boundary of its agencies. Like the stone cast into the sea, it moves the waters of the ocean. How much is this damage in dollars and cents?

Then, again, every man guilty of such a habit, is, on an average, leading probably some half-dozen young men and boys in the same sensual and ungodly course, by his example, to incur all the damages and the guilt which are filling up the measure of his own accountability. Now, what is the magnitude of this man's crime as it will probably appear in the day of judgment? What is the amount when put into dollars and cents? What the amount of robbery committed, when all the bearings of his course are reck-

oned up? Will it amount to ten thousand dollars? — or will it be an amount beyond all computation? Who, then, is the greater sinner in the light of eternal truth, the man who destroys himself and others, by sensualities, or the man who committed this highway robbery of ten thousand dollars?

## ERRONEOUS APPETITES ON INTELLECTUAL CHARACTER.

The right balance of the mental organs very much depends on a right condition and action of the physical system. If such a course be taken as will excite unduly the animal portion of our being, the standard of intellect is depressed. The sure tendency of any unnatural stimulant or narcotic, is to degrade the standard of our physical nature, and lower the tone of intellect. Any undue excitement of the nervous system jostles the mental forces; and this process continued, weakens and prostrates them. After a while they come to depend on the physical stimulus to keep them from torpidity, and rouse them to life and action.

Those who have been accustomed to indulgence in artificial stimulants, as a general rule, have only given signs of mental power upon exciting occasions. Instead of being always alive to the ready appreciation of everything that is passing, and the immediate aid of every enterprise and every call of humanity, they only now and then wake up to feel and act, when the unusually exciting nature of the subject, or a large dose of some stimulating drug, breaks through the cloud that has darkened their mental vision. We

sometimes meet with statesmen possessing great breadth and depth of intellect, but whose physical habits have been so at war with nature, that their talents have become comparatively buried up in the mire of sensual indulgences ; and it now requires a power of stimulus, sufficient under other circumstances to produce a mental earthquake, to bring out their buried resources.

These who have become long accustomed to excitants and narcotics, have found themselves unable to perform much mental labor without them. When one steam of stimulus has become exhausted, another must be got up ; and especially when some extra weight of care, anxiety or labor is to be borne, then a fuller draught of alcoholic drink, or a stronger cup of coffee or green tea, or a larger plug of tobacco, must be taken to bring out and goad up the weakened energies of mind to their required bearings. If we would, on all occasions, have our mental forces awake and ready for action, we must preserve the nervous system free from all stimulants. Give to the system healthful nutrition, but no artificial excitement.

Depression of spirits is no uncommon result of continued stimulants and narcotics. Gloominess of mind is closely connected with prostrated nervous energies ; and more or less will every nervous system suffer, perceived or unperceived, that is fretted with stimulants. Where there is extra excitement and its inevitable reaction, continually alternating each other, there must be some degree of damage done to the nervous and mental forces ; and when that damage becomes con-

siderable, a degree of melancholy is very liable to ensue. This is true in regard to all stimulants, whether alcohol, coffee, tea, opium, or tobacco; and especially is it true of the latter.

One writer, relating his own experience in tobacco, says: "At times I had feelings which seemed to border on mental derangement. I felt that everybody hated me, and I, in turn, hated everybody. I often lay awake nights under the most distressing forebodings. I have often arisen in fitsful and half-delirious slumbers, and smoked my pipe to obtain temporary relief from these sufferings. I have often thought of suicide, but was deterred by a dread of a hereafter. In a few weeks after entirely relinquishing this habit, all these things were gone, and my health fully restored." Many cases of a similar character, from the same and from a similar cause, have come under my professional observation during the last twenty-five years.

An irritable temper is another evil consequent on the use of stimulants and poisons. Excitants of all kinds, and especially narcotics, disturb the electrical currents of the nervous system. Electricity is constantly circulating in the nerves of the whole body; and on the healthy condition of this circulating substance depends, not only the vigorous and healthful state of the whole body, but especially a happy and quiet disposition. A disturbed state of the electric circulation is not only constantly tending toward ill health, but to a fretful, dissatisfied, and peevish temper. If, therefore, any one would cultivate a quiet

and unruffled temper of mind, let him carefully abstain from every unnatural appetite. Let him be satisfied with the instincts which God has made, and the plentiful means he has furnished for the gratification of them in the varied fruits of the earth, which are palatable to the taste, nutritious to the digestive system, and unoffending to the vital principle.

Mental imbecility, in perceiving and determining against the wrong, is still another result of wrong physical appetites. There is often found want of courage, when a wrong habit is seen, to take up arms against it with a determination to conquer or die. The indulgence practised so enslaves the mind that its power to govern itself is comparatively destroyed. The reins of self-government have fallen from the hands of the higher man into those of the lower. The higher faculties in human nature have become slaves to the despotism of lust. Instead of judgment, reason and conscience, holding sway, appetites, even lower than those of the brute, have gained the ascendancy, and they now sway the sceptre,—appetites contrary to instinct, and such as no brute can be compelled to create. The mental attributes of him who was created a little lower than the angels, are down-trodden and buried in the dust, under the iron heel of despotic lust. He who bows to this foul slavery is no longer a MAN, but has descended below the standard of the beasts of the field.

The people — especially the American people — do not apply philosophy to their eating and drinking.

They do not take principle to enforce that self-denial which ought to distinguish them as moral beings; and, failing to use principle here, shows signs of too little of it anywhere. He who will not, under light, apply principle to his eating and drinking, will not be likely to be very tenacious of its application anywhere. If animalism bears sway in one case, it is more likely to govern in another. If there be a want of regard for God's law in our physical nature, there will be less respect for it written anywhere else. If there be a disposition to disregard duty in this, there will be a tendency toward nullifying moral obligation in any other direction. If men will avoid light shining upon one point of duty, they will probably try to shun it in others. If they will bury a living conscience to avoid its rebukes on their self-destruction, they will be likely to stifle its warning voice on other vices and other crimes. He who would have a clear mind to perceive these things, must have a body with right habits.

Intemperance of any kind will deaden the native acuteness of the perceptive organs. Over-eating will not only blunt the vigor of bodily health, but stupefy the intellect. Even a moderate degree of habitual gluttony, will turn the purest genius into mere animal lustings, which war against God and humanity. There are few men of real genius who will make a god of their belly, because elevated intellect will generally be disgusted with such low and grovelling temptations. A high range of thought cannot come down to such sordid things. But there are a few of strange and

incongruous compound, — where elevated genius seems surrounded with grovelling sensualities, — where, like an oasis in the midst of the desert, mind has no adequate chance for development and expansion ; and where, though it may sometimes show its original gigantic strength, there is still no soul to guide it ; where things purely philosophic can be deeply fathomed, but where the perception of the right and the wrong, is weak, vague, and erratic.

Intemperance is of two kinds. One consists in the over-indulgence of natural appetites ; the other, in creating and indulging those which have no origin in nature. The Creator has given us an inclination for food adapted to the nourishment of the body. Moderation in its use is temperance ; immoderate indulgence is intemperance. But even moderation in the use of things as luxuries which God never made for such a purpose, and things for which he never authorized a taste, is intemperance. To be temperate in the use of natural appetites, is to indulge them rightly ; but to be temperate in regard to unnatural indulgences, is to let them entirely alone. "Touch not, taste not, handle not." Temperance is total abstinence from wrong things, and moderation in right things. Either kind of intemperance is at war with the progress and prosperity of mind.

If we would keep the digestive powers of mind free and vigorous, we must preserve a healthy state of physical digestion. There are few things that will so derange and oppress mental efficiency as a deranged

stomach. Gloominess, and a foreboding of all imaginary evils, are common attendants. Deranged physical organs produce a morbid state of mind; and then a morbid state of mind increases the deranged action of the body; so that, when this wrong action is once established, the evil consequences increase by constant action and reäction. The origin of the whole difficulty may be in either species of intemperance. It may be by pushing the indulgence of natural appetites beyond their right boundary in respect to quantity, quality, or frequency; or it may be by the most moderate indulgence in things which the Creator never intended for such a purpose.

The use of meats tends to lessen mental activity. Those especially who are devoting themselves to intellectual pursuits, would gain great advantage by total abstinence from them. Their being required for the maintenance of a vigorous muscular system, which is a very popular idea, is a perfect delusion. The bread-stuffs, and other products from the vegetable kingdom of nature, as shown in a former part of this work, contain all the elements necessary for the replenishing of the body; and some of them more largely than the meats. Facts are stubborn things touching this matter. The laboring Irish, who literally use no meat till they come to this country, are among the most hardy men found in the world. They have constitutions as unyielding as brick-bats, and can withstand the hardest knockings like sledge-hammers. But after being here a few years, they often become infirm, and die in early life from adopting American habits.

If meats were essential to the sustenance of a vigorous body, then a due proportion might be necessary for mental vigor, because of the dependence of mental development on physical soundness. But if meats are not essential to bodily energy, then we can safely put away that which will embarrass the mental powers. In the course of my travels, several cases have come under observation where individuals, for different reasons, had abstained for a considerable time from the use of meats, and they uniformly have said that they had just as much bodily vigor, and a far larger amount of mental activity and force, during that period.

But it must be remembered that when we leave our meats, we must not cease eating. When some of the followers of Mr. Graham relinquished animal food, they undertook to live on comparatively nothing. They went from one extreme to another. The body must have sufficient nourishment. We cannot live upon mere air. But the more simple and unstimulating the food which sustains the body in its healthy and vigorous state, the more active and forcible will be the mental system; while that which deadens the elasticity of muscular fibre, stupefies the intellectual forces.

#### ERRONEOUS APPETITES ON MORAL CHARACTER.

Great sympathy exists between the physical and the moral nature. Physical habits have greatly to do with the general standard of virtue. Habits which create a morbid action of the bodily functions, have a tendency to produce a morbid state of moral feeling.

Any habit which lowers the standard of healthy action in the human system, tends to degrade the powers of the higher nature. Habitual stimulants and narcotics applied to the nervous system, not only drive the body into an early grave, but insidiously produce a torpid state of moral sense. The creation and indulgence of unnatural appetites disturbs the balance which the Creator originally gave to the organs of the brain. By their action on those portions of brain which relate to the animal propensities, they produce unwonted activity in them, by which their influences become disproportioned to those that relate to our moral nature.

Recklessness in bodily habits tends to recklessness in moral character. Those things which fret and derange the stomach, tend to corrode the finer feelings of the heart. The stomach is an organ of vast controlling power. If this organ is right in its functions, generally all is right that pertains to the health of the body. If it is wrong, then all is wrong. So, too, it has vastly to do with the right formation of moral character. Such is its strong sympathy with the brain and nerves, which form the bond of union between soul and body, that it bears a powerful sway over moral sentiment. Hence, erroneous eating and drinking inevitably conduce to erroneous thinking and acting. Licentiousness in food and drinks leads to licentiousness in matters of moral feeling. A licentious body begets a licentious soul.

Pampering false animal appetites, or pushing natural

ones beyond their proper boundary, gives a balance of power to the animal propensities over the moral sentiments ; and this process continued, tends to animalize the mind and degrade all the higher powers of the man. It is now he ceases to govern himself, and becomes a servile captive to the sway of his own grovelling, sensual passions. Then all the attributes of the soul, like the Hungarian exiles under Austrian barbarity, become slaves to the despotism of animal lust.

Depraved physical appetites greatly obstruct moral culture in the rising generation. Unnatural luxuries, and irregular eating and drinking, by depraving the mind and corrupting the heart, greatly retard moral and religious instruction bestowed on the young. The mother who would instil virtuous principles into the mind of her child, must begin by establishing in that child right physical habits—right habits of eating and drinking. She must insist on a proper use of natural luxuries, and the utter refusal of unnatural ones. Every mother, therefore, who would secure the physical welfare, and through it the moral and eternal well-being of her children, should be herself a practical physiologist, that she may know what are, and what are not, correct physical habits. She should acquaint herself with the laws that govern physical life, and the nature of the popular sensual indulgences of the day, which war against physical and moral health.

It is a most lamentable fact, that scarcely one to a hundred of the mothers, having such tremendous

responsibilities on them, has ever read the first word on practical physiology. The great mass of them are as ignorant of the proper physical training to be bestowed on children for their physical and moral soundness, as are the herds and flocks on the hills. A vast amount of the crimes of the age is chargeable to the ignorance and indifference on this subject of the mothers of this generation. Even some of those who have read, do not appreciate its importance to themselves and others; and are not prepared to enforce its teachings on those under their charge, because their example is wanting. O, when will they wake up to this matter, and cease exposing themselves to a most fearful accountability?

If the mothers would have their sons become men with healthful bodies and hearts, they must guard them with special care against the gross and engrossing sensualities of the men of this age. They must guard them against the indulgence of every appetite that can injure the stomach and nervous system, especially against the use of stimulants and narcotics. Not only alcohol, but other stimulants, should be avoided. The coffees and the teas, especially the green teas, as well as that most deadly of all poisons in popular use, tobacco, should be rejected. These sensualities, and especially the tobacco lust, all have their bearings on moral character; and the earlier in life these habits begin, the more powerfully will they lower the standard of moral feeling.

Sabbath-school superintendents and teachers have a

responsibility in this matter. Pupils, with bad eating and drinking habits, are less susceptible to Bible instruction. No one at the present day would think of receiving a boy into Sabbath-school who was a habitual user of strong drink. Every one feels that alcohol so encases the soul that it cannot comparatively be reached with religious instruction, nor even by the Spirit of God. There are other wrong habits which oppose themselves to divine instruction. If a pupil should offer himself for membership of a Sabbath-school class, whose breath and lips, though free from the debasing influences of strong drink, were, nevertheless, corrupted with the taint and defiled with the stain of tobacco, he should be received only on the condition that he will abandon the vile habit. The truths of God cannot be so readily instilled into his mind, till his mouth is washed from the defilement of this great agent of Satan.

Meat-eating, especially in the excessive proportion of its present use, has also its moral bearings. By its stimulating properties, it acts on the animal organs of the brain, increasing the activity of the animal propensities. While it gives no additional strength and durability to the muscular system, but renders it more clumsy and torpid, it does give an undue degree of ferocity to our animal propensities. It makes us more animal, and less intellectual and moral. This is a matter, not of opinion, but of well attested and generally acknowledged fact. This brings us up squarely to the question, whether the indulgence of this less

natural and not essential form of nutrition, shall be considered worth more than all the moral considerations connected with it. It is a habit not to be put upon the same list with the poisonous drugs, opium, alcohol, and tobacco; but it is one that is doing its own work of injury to the tone of human sympathy and of moral feeling,—especially in the excess to which it is pushed in the United States, and more particularly at the South.

The slaughtering of animals has a tendency, on those engaged in the business, to lower their estimate of life in general, and blunt the terror of shedding blood. If my life were to be put into the hands of jurors, where the decision of the case depended in any considerable degree upon their due apprehension of human sympathy, and their right appreciation of human life, let me have any class of enlightened citizens to sit on that jury-bench, rather than men from the slaughter-house.

The surgeon is not subject to influences of this sort. He takes his knife in hand, not with any feeling of wantonness toward his fellow-being; but, with a heart deeply stirred with human sympathy, he severs the morbid portion of the sufferer's flesh, that he may save him from ultimate suffering and premature death. He deadens not the flame of fellow-feeling burning in his breast, but keeps it the more alive by its fresh and oft-repeated kindlings, as case after case comes to his hands for counsel and relief. Not so with the slaughter-man. With wanton hands and indifferent heart,

he strikes the fatal blow upon the head of the helpless, unoffending fellow-being, sells him at his feet, and spills his blood upon the ground ; and this, simply because he hankers for his flesh !

My heart was agonized, a few months since, at witnessing a scene of slaughter. The poor brute was pursued by men and dogs ; the latter seizing him by the ears, and the former, without compunction, applying the head of the axe to his brain. The poor creature ran for life, and bellowed for help. His cries for aid, and his struggles for escape, seemed enough to wake up heaven and earth to his sympathy ; but men and dogs, with like carnivorous zeal, pursued till blow after blow brought him to the ground, and the deadly stab was given to the current of life. My heart silently exclaimed, If ever the disposal of my life shall be thrown into the hands of men, let it not fall into the hands of those who butcher life ! If ever that statute, requiring blood for blood, and life for life, shall cease to disgrace our civil institutions, we must not put butcher-men in our legislative halls.

Furthermore : one bad physical habit prepares the way for another of a similar kind. Alcoholic drinks, by the morbid influences they produce on the mucous and nervous membranes of the mouth and stomach, create a demand for some other unnatural thing. Thus, alcohol prepares the way for tobacco, and tobacco for alcohol. Hence, as a general rule, these two articles have been found associated in the same mouth.

They are twin sons of that Demon who goeth about seeking whom he may devour. They are two great agents of him who is seeking to destroy both soul and body.

Bad physical habits lead also to bad moral habits. Bad physical and bad moral practices move in clusters, and abide together in families. Hence, it is found that the veriest vagabonds on the earth are literally saturated with the combined essences of alcohol and tobacco. The red nose, the filthy lips, and the Stygian breath, are the standing ensigns of their calling, and the undisguised badges of the association to which they belong. Nature has fixed her mark of condemnation upon them. She has branded them as culprits awaiting the final issues of their varied and associated crimes.

Liquor-drinking, tobacco-using, gambling, and profane swearing, form a common brotherhood of vices. Let this entire land be surveyed, and very rarely will there be found a profane oath proceeding from any other than an impure breath and from defiled lips. Rarely will a man be found insulting Jehovah to his face by profaning his name, among those of uncontaminated lungs and unstained mouth. These and other kindred habits may at any time be found in tippling and gambling recesses, mutually congratulating each other, "Hail fellows, well met!" They are unwilling to be apart; and will, probably, when once their acquaintance is established, continue their associated revellings till they shall be arrested and held to bail.

for the day of judgment. And such is the similarity of their tastes and their tenacity for their social gratifications, that, if it were practicable, they would wish to indulge their lusts together, even for a dark eternity. There can scarcely be a doubt, if it be possible, but that among those who will have lost their souls through the benumbing influences of strong drinks and narcotics, there will be wailings in hell after rum and tobacco.

Considering the inevitable brotherhood of different morbid appetites, if we would promote temperance in respect to alcoholic drinks, we must put away its twin — tobacco. Those who plead the cause of temperance with tobacco in their mouths, make themselves contemptible in the eyes of all who have any general light on the nature of kindred and associated appetites. While they profess to deny themselves of hurtful lusts, and are putting them away in one form, they are holding on upon them in another. They quit alcohol and make up its loss by putting into the mouth a larger plug of tobacco. They deny themselves of the lesser, and continue the stronger poison. They put away the less filthy sin, and supply its lustings with a more enslaving and brutish indulgence, — one whose power to create morbid results is greater than that of the worst kind of liquor, when taken with equal excess.

In this matter, temperance men manifest a degrading cowardice. Professing open warfare with a great physical and moral evil, they are still ardently embracing

another evil that is doing a worse and more secret work of ruin to the physical, and also an extensive injury to the moral welfare of the men of this generation. While they are turning the devil out at one door, they are inviting him in at another. They are wanting in the moral courage necessary to meet the foe in general combat at every avenue, determined to conquer or die. While the man signs the pledge and keeps tobacco in his mouth, he is scarcely half converted to the temperance principle. While he holds on to this accompaniment and substitute for alcohol, he is more liable than though he would abolish both, to return again to his cups.

If we would elevate the moral standard in any country or community, we must begin by correcting their physical habits. The people must put away from themselves and the rising generation the practice of unnatural eating and drinking, and other physical vices. Is there not a serious declension in the standard of virtue in our own favored America? And is not that declension still moving in its onward and downward course? Look at the character of the young men of the day. Are they as uniformly attentive to their obligations to parental government, and to moral and religious principle in general, as were the young men through whose fidelity and moral courage our country was released from the British yoke, and made to shine forth in the glorious light of religious freedom? Can we look for such men as George Washington, Benjamin Franklin, and John Quincy

Adams to come forth from the ranks of the young men of our own day? If we would see such patriots ripening into public life, we must look for them among men whose early habits are like those of the young Washington, the young Franklin, and the young Adams.

No one who appreciates moral rectitude can take observation upon the demonstrations of immorality that now are given by young men, especially those residing in our large towns and cities, without agony of spirit. Let any man spend a Sabbath four or five miles out of the city, and see the carriage-loads of young men from town, riding as though in chase for life; racing horses; profaning the name of Deity; and disturbing even the quietness of the house of God. And what are the seals that perfect the bond of union among these associated violators of God's holy day? The social glass, and the inspiring cigar. They drink to rouse them to great hilarity, and smoke to stupefy conscience and becloud its moral vision. Shall we look for high moral worth ever to be developed in such young men?

Is not the standard of moral principle lower among business men than it was in the early history of our country? And is not the standard of moral feeling among them growing lower and lower? Where can be found God's noblest work—an honest man? Where the man whose integrity can bear, in all the departments of his sphere in life, the scrutiny of Heaven? Where the man that can be trusted out of sight? Is not the same amount of business transacted

now with almost infinitely less adherence to principle than in earlier times?

In political life, where are the men of strictly moral and political integrity? Where the men who serve their country for their country's good,—who are determined, whether friends are gained or lost, always to act from principle? Where the men who do not care infinitely more for their own promotion in honor, than for all the highest interests of the land? Where the men, if our country should be invaded, who, like our fathers, would lay freely on their country's altar "their lives, their fortunes and their sacred honors"? Where the men who would come to the rescue to save our standard of civil and religious freedom from being laid prostrate by some foreign power, provided their own personal safety or aggrandizement was not concerned? Where the men who, if our country was invaded, could shed as pure and philanthropic blood as did our fathers in the Revolution? Where those of like holy patriotism?—and "echo answers, where?"

There are men enough, in case of war, who would enlist for the battle-field; no matter whether the war were right or wrong; whether it were based on correct principle, or on the basest selfishness; whether it were called for in self-defence, or a war of vile aggression. They are ready for the fight, because their physical habits have provoked undue activity of the animal propensities; the combative and destructive attributes of the mind have gained ascendancy over conscience and human sympathy; the lower man prevails over

the higher, till brute ferocity has supplanted that true moral courage which always controls human wrath, and suffers death for human good and the honor of God.

Look at the politico-moral aspect which our country now presents, North and South. See the party feuds and sectional factions which are engendering strife and discontent. A few officious and office-seeking men, void of true patriotism, are endeavoring to promote their own popularity, by means adapted to undermine the fundamental principles of a truly republican government, the real basis of human sympathy, and the genuine standard of moral rectitude. There are men North and South, who, though professedly zealous for the authority of the constitution, are infinitely more concerned for their own notoriety and elevation, than they are for the safety of the Union and the interests of the people. There are men North and South, who, though they cry aloud and spare not for the safety of the Union, are so deficient in true patriotism, human sympathy, and moral integrity, that they are become the heaviest brakes to the car of American freedom.

Intelligence and virtue are the two main pillars for the support of a republic. Without these no democratic government can be permanent. General knowledge and moral principle alone can prepare any people to govern themselves. One of those pillars in our republic is sound and firm. Intelligence is wide spread, and increasing in all the departments of American society. Let our virtue be equal, and our Union can

never be in danger from civil commotion. Let this be wanting, and a government where the widest intelligence prevails will fall by its own hands. And if the standard of virtue shall continue to descend in our own land, as it has for the last few years, our government will be found changed from its original character, to that of anarchy and ruin. That principal pillar, virtue, is decaying at its very foundation.

And wherefore this decline in virtue? What can be done to bring back the moral integrity of early times? Let the people bring back the physical habits of early times. Let them bring their eating and drinking into conformity to natural law and moral obligation toward God, and they will effect a mighty change in the standard of virtue. Let the mothers of this day train the rising generation to habits of virtuous eating and drinking, and they will lay a sure basis for virtuous thinking and acting. Let them cease to countenance stimulants and narcotics, and other physical vices which prompt undue animalism, and oppress the developments of the soul. Then, and not till then, will the decline of moral feeling cease its ebbing, and virtue's saving power begin its flowing tide.

#### ERRONEOUS APPETITES ON CHRISTIAN CHARACTER.

The Bible presents us with the fearful truth, that our physical nature is liable to be brought into warfare with our spiritual. It therefore charges us to " abstain from fleshly lusts which war against the soul." If we

obey the laws which God has given to our physical forces, they will perfectly harmonize with those of our spiritual being; so that, when we touch a chord of our physical sympathies, it will send forth a tone in perfect harmony with every vibration of the heart. When we violate any law of organic life, we induce a morbid organic action, by which we affect, by mere sympathy, the spirit. But when we war directly against oral instinct, by the culture of unnatural appetites, we not only jostle, by sympathy, the healthful harmony of the flesh and spirit, but we create a lust which wars against the soul. Then, instead of our physical and spiritual emotions being able to keep time and harmony with each other, a civil war is instituted between the lower faculties and the higher attributes of our compound being.

Every unnatural physical appetite, therefore, becomes a warring lust. Everything that is at enmity with the instincts of nature, creates a diseased condition of the soul. Such is the relation which the inner and outer man bear to each other, that every morbid sensation, every indulgence by the mouth which Heaven has never sanctioned, embarrasses its healthful character. Some seem to suppose that the only lusts which the apostle charges with making aggressions on the soul, are such as violate in some way the spirit of the seventh commandment; whereas this is but one among many forms of sensualism which are preying upon the vital forces of true piety. More damage is done to the soul at the present day by lust-

ful idols which find access to the internal man through the medium of the mouth, than in any other way—idol lusts which do not come as the result of natural appetites overreaching their true boundary, but appetites which have no origin in nature.

An objector may refer me to the saying of Christ, “Not that which entereth into the mouth, but that which proceedeth from it, defileth the man.” But when the Saviour, in reprobating the bigotry of the Jews in insisting on adherence to their traditions, told them that not the eating of bread with unwashed hands, but rather the words of the mouth produced moral defilement, he could not have intended to teach that the luxury of “wine which is a mocker,” and of “strong drink which is raging,” could do no harm to the soul. The apostle declares, that he who would make high attainments in godliness must be “temperate in all things.” Of course he would have us understand that temperance in eating and drinking, as well as temperance in every other respect, was indispensable to proficiency in piety. He would have us “lay aside every weight,” as well as every highly “besetting sin,” that we may be able to run without embarrassment the Christian race, and obtain the Christian victor’s prize.

Temperance, as before stated, is of two kinds: moderation in the use of right things, and total abstinence from wrong things. Temperance, in the use of bread, is moderation; temperance, in regard to strong drink, is total abstinence. To be temperate in religion is to

serve God with a steadfast zeal, which is according to knowledge ; to be temperate in regard to fanaticism, is to let it alone. We may be intemperate in the quantity of food. Gluttony buries the soul in gross sensualism. Untimely eating, through its derangement of physical action, retards and diminishes spiritual zeal. All irregularity in eating embarrasses our spiritual emotions, by disturbing vital functions. A dyspeptic stomach and a torpid liver are the enemies of God, and the opponents of the Holy Ghost.

The quantity and quality of food suitable at one time, is unsuitable at another. That quantity or quality adapted to a man of active or laborious life, during the business part of the week, would be unsuitable and morally wrong on the Sabbath. Vast damage is done to the spiritual welfare of the church by their Sabbath-day eating. In many of our large cities and towns especially, they are in the habit of having even the largest and richest dinner of the whole week—a sort of Thanksgiving dinner—every Sabbath. While they require less and more simple food, they take it more largely and more complicated. While the quantity and the quality oppress the stomach, the mind is also embarrassed ; the high-seasoned meats obstruct the reception of truth and the unction of the Holy Spirit. In the afternoon, especially, the minister of Christ pours out potent truth with pathetic earnestness, but, instead of preaching to the understanding and the heart, he is preaching to roast beef. If he also has too grossly indulged, it is beef preaching to beef.

Animal food, at all times, has its bearings on religious character. It ought to compose no part of a Sabbath-day's diet. But the taking of it at any time retards the progress of the soul in spirituality. By its oppressive influence on intellect, and by its stimulating power on those animal propensities which, when they gain ascendancy, degrade the moral feeling, it hinders spirituality and growth in grace. This is not a matter of fancy, but of facts. Everybody acknowledges that meats increase the activity of the passions ; and if so, then it is a matter of the plainest deduction, that they tend to lessen the susceptibility of the soul to the force of truth, and to advancement in spirituality. It requires more of the divine agency to convert a man who lives much on meat, — other things being equal, — than one who does not. It requires more sanctifying grace wholly to subdue the Christian's body and soul to God, than it would if no meats composed any part of his diet.

It may be said, the Bible does not prohibit the use of animal food : true ; nor does it utter any express injunction against gambling. How then do we judge that gambling is a sin ? Surely not by express declaration, but by a knowledge of facts. What are the nature and effects of gambling ? So, too, in regard to the eating of meats. What are the facts ? What the nature and effects of meat-eating ? Philosophical facts reveal God's truth with as much plainness and authority as though it were written in the Bible. Now, then, it is a fact, as before stated, that meat-eating stimulates the

action of the animal propensities, which, by inordinate activity, must oppress the soul ; and this fact is nowhere among intelligent men disputed. Let this fact speak for itself ; and let its truth bear, at least, upon the excessive meat-eaters of the day. The question is not one that should be settled by the voice of fashion or appetite, but by the testimony of facts.

It may be said, furthermore, the Bible sanctions the use of meats. True, it is allowed ; and so the eating of quails, with the consequences, was allowed when the Israelites murmured over the vegetable nourishment which God had furnished them. So polygamy was allowed and legalized. Divorce was also allowed and arranged by law, which the Saviour repealed ; giving the reason why such things were permitted : “ Moses, because of the hardness of your hearts, suffered you to put away your wives.” So, too, there was a law requiring a tooth for tooth, breach for breach, eye for eye, and life for life — capital punishment. All this the Saviour repealed, and established a better law in its stead. In the times of Moses, laws were made which could best accomplish the ends of law. It avails nothing to put forth a law which public light and sentiment will not sustain. The Scriptures do not give precepts for every specific act, but lay down general principles which are applicable to all cases. When a question comes that is not settled by specific declaration, it must be looked at in the light of facts ; and if its facts chime with the spirit of general precept, well ; if not, then the question demands a negative.

To another kind of intemperate habits, belongs the use of stimulants and narcotics. While they fret and disturb the nervous system, which is the bond of union between the soul and the body, they derange and blunt in a great degree the affections of the heart. The love of strong drink, after that thirst is once formed, fastens with inveterate grasp on the spirit of the man. It is one of the most enslaving of all lustful appetites. Its enervating and deadening influences on the intellect and the heart are such that its chains must generally be broken before the Gospel and the Spirit of God can convince of sin and lead to the Cross. But this is not the only lust which finds its way to the soul by the mouth. There is another, more potent and more enslaving,—the passion for tobacco. It is a lust, not as noisy, but more enticing and irresistible. It clutches its victim with greater firmness, and holds him with a more determined and unyielding grasp.

There is no appetite so strong as that which has no origin in nature. Appetites which are wholly created, and in conflict with our instincts, are the ones which most enslave the soul. Among these, there is none so despotic and powerful as the appetite for that loathsome weed which finds entertainment in almost every man's mouth at the present day. There is no other idol god in Christendom which is requiring so large an amount of sacrifice. No other idol is requiring so much to be laid upon its altar, of time, of physical and moral energies, and of pecuniary support. It is committing

robbery on the Saving's Bank of Christ, annually, of not less than \$5,000,000, and leaving only less than \$1,000,000 for the various missionary purposes annually sustained by the church. It is so blinding the eyes of the professed followers of Christ, that they think themselves sustaining a good evidence of piety while putting short of \$1,000,000 into the Lord's treasury, and laying at the same time the annual contribution of \$5,000,000 upon its sensual altar. This single fact shows that the churches, taken in the aggregate, are serving that "earthly, sensual, devilish" idol with more than five times as much zeal and devotion, as they are the Saviour of the world for benighted men.

Facts developed by a church in Texas, which were given me while in that State, testify on this point. A small church, and the only one, in a small village, thought it their duty to obtain, if practicable, stated preaching for that place. To do this, \$300 were required. They succeeded in raising \$200, but the remaining hundred could not be obtained; therefore the place remained without stated preaching. On examination, it was found that the twenty male members of that church were expending annually \$20 each for their consumption of tobacco. Here, then, was the sum of \$400 which they could cheerfully pay annually to their tobacco god, but could not spare another hundred for the honor of Christ, and the salvation of men through the preaching of the Cross. They chose to forego for themselves the privileges and

benefits of the Gospel, and to let the place remain in comparative heathenism, rather than cease, in any degree, their devotion to lust, and save one hundred dollars to add to that already obtained. Would to Heaven this was an isolated instance! But may God have mercy upon the American church, which is but fairly represented by this single case,—\$5,000,000 for annual consumption of tobacco, and less than one million for Christ and his cause abroad!

Though this habit is so unnecessary, so foolish, so hurtful, and so wicked, yet there is none which cannot be given up with less sacrifice of feeling. It gives an appetite that is dearer to its victim than life itself, and its suspension brings terrors which are stronger than death. Many a man has testified to me that, though he was fully aware that this indulgence was fast killing him, yet he COULD NOT give it up. A student at Andover Theological Institute had long been in the habit of using tobacco. In the course of his studies his health failed. He was repeatedly told that it was this which was killing him, and he confessed himself conscious of it. He was told that, unless he would quit it, he must give up the idea of living to preach the Gospel, and fall a sacrifice to his appetite. With all this staring him in the face, he continued its indulgence, left the institution, and soon after died.

This article, being a more powerful poison than alcohol, imprisons its victims within stronger bars and doors. The dram-drinker may be deterred by the moans and tears of a desolate wife and suffering chil-

dren. But let him who has long continued to pay his devotions to tobacco's burning altar, find his wife and children houseless and destitute, if he had no other means for their supply of things needful, than to give up his tobacco, the smoking embers on that unholy altar would cry out with unceasing voice, "WE MUST BE GRATIFIED!" No present wants of those dependent on his purse, no affection's strong appeals, have eloquence enough to quell the riotings of lust, and persuade its worshipper to forever cease this base idolatry.

The cause of humanity would find little sympathy in the hearts of men devoted to tobacco, if its demands could not be met without ceasing to burn incense to that god. Let twenty tobacco-users pass before a hut of the poor, where they found, on a cold mid-winter night, a widowed mother with her children shivering over a few dying embers, with no fuel, and suffering from hunger, having ate their last morsel of bread twelve hours since,—and if their only means of giving relief consisted in giving up this useless habit, and in presenting a part of the money saved, for their relief, probably nineteen out of twenty of them would pass on, and let them freeze and starve to death. This is a most appalling representation, but one which only needs putting to the test to prove its truthfulness.

Can any man carry out Christian principle and continue any destructive habit with his eyes open to its true character? Christians are called upon to lay

their “bodies a living sacrifice” upon the altar of Christ. The apostle used the term “bodies,” because the living human body is the only medium through which the mind and soul can now develop themselves. If the outer man is in an impaired state, the developments of the inner man suffer. If the physical system is subjected to habits which are antagonistic to its laws, then it wars against the soul. If the bodies offered upon Christ’s altar were examined by the scrutiny to which Jewish sacrifices were subjected, what would be the result? How many would be left upon the altar, accepted? No lame sacrifice could there be received; no injured or diseased sacrifice could be tolerated. It must be a sound and valuable offering. How many such bodies are the professed people of God now offering as living sacrifices? How many bodies, possessing all their native vigor and strength, are given to Christ? How many, whose minds and hearts are uninjured by weaknesses of physical nature?

Many are kept from the house of God on the Sabbath by their bodily infirmities. Others come to church in such physical feebleness that they can enjoy little, and be little profited. And yet nineteen-twentieths of those infirmities are the products of their own willing ignorance and disregard of the laws of health. Where God has established a law, and affixed a penalty to its transgression, can he reverse that law, or avert its punishment? It is required of us that we “glorify God in our bodies and spirits which are his.” Can we glorify God in the Spirit while living in the

known violation of the laws that belong to our spiritual being set forth in Scripture? Certainly not. Nor can we, in any possibility, suitably glorify God in our bodies, while we violate the laws which God has attached to them. If, too, the body sin, it sins always by the consent and dictation of the mind. The body acts not alone. Some of its strongest natural passions are awakened into excess by the agency of thought; and when the passion ripens into action, the mind still assents. All our unnatural appetites originate and continue by erroneous promptings of mind. If we would to the uttermost glorify God, therefore, we must keep body and spirit in conformity to law.

When we wage war with our bodies, we war also against our souls,—not only because a healthy soul is dependent on a healthy body as its medium of development, but because of their mutual sympathy. A pious soul cannot prosper in an impious body. The heart cannot maintain consecration to Christ, while the body is serving its lusts. The inner man cannot faithfully serve God, while the outer man is serving the devil. The spirit of God cannot secure our growth in grace while the spirit of stimulants and narcotics is spreading its leaven through all the functions of the flesh. To preserve a wholly sanctified soul and spirit, we must have a wholly sanctified body. There must be harmony between the body and spirit, in order that the Spirit of God dwell in us. A discordant condition of the outer and inner nature, grieves the Divine Spirit. An irritated stomach and

a deranged liver, resist the Holy Ghost. A morbid nervous system and a disordered brain, obstruct the workings of sanctifying grace, and endanger the final salvation of the soul.

In view of these truths, the apostle lays great stress on the right condition of our physical nature; and he gave us in himself a practical demonstration of his faith concerning them. He says: "I keep under my body, and bring it into subjection, lest that by any means, when I have preached to others, I myself should be a castaway." He calls on us not to let sin reign in our bodies, that we should obey it in the lusts thereof. Neither to yield our members as instruments of unrighteousness unto sin. He asks us to put away the service of the flesh, and make no provision for its lusts; and to "cleanse ourselves from all filthiness of the flesh and spirit, perfecting holiness in the fear of God." He encourages us, also, when he declares "There is therefore now no condemnation to them which are in Christ Jesus, who walk not after the flesh, but after the Spirit."

The same apostle charges the Galatians to "walk in the Spirit, and not fulfil the lusts of the flesh;" for the flesh lusteth against the spirit, and the spirit against the flesh. He then enumerates some of the forms of fleshly lusts; among which, are "idolatry, drunkenness, and such like." And, after mentioning some of the fruits of the Spirit, among which is "temperance," he adds: "And they that are Christ's, have crucified the flesh with the affections and lusts." In

addressing Timothy he says: "But they that will be rich, fall into temptation and a snare, and into many foolish and hurtful lusts, which drown men in destruction and perdition." And yet, probably among all the lusts of that day into which wealth tempted the people, there was no one making its ingress upon the soul through the mouth, that was so "foolish and hurtful" as are some of the idolatrous appetites of the present times.

While the mind occupies its earthly tabernacle, its vigor and activity depend much upon the healthy condition of the vital forces. Whatever, therefore, depresses these, depresses the forces of the soul. The most deadly thrusts of tobacco are hurled at the very seat of physical life — the vital forces of the nervous system. Here is its chief work of destruction to the body; and while doing this, it is also jostling the equilibrium and force of the immortal part.

After long devotion to this narcotic, or to any other powerful unnatural agent, the mental and spiritual forces are lost without it. A social religious meeting, composed of those who had long degraded their bodies and depraved the nervous system by such agents, and who had been deprived of them for forty-eight hours, would be a gloomy affair. No signs of emotion would be found there, except the internal moanings of denied lust, — little desire for anything but the refreshing of agonized appetite with its gratification. A fresh unction of the poisonous essence would be far dearer than the divine unction from Heaven.

Tobacco, upon an enlightened mind, is as truly an obstacle to the inspiring agency of the Divine Spirit, as is alcoholic liquor. It as certainly encases the soul with its dense incrustations over its susceptibilities. It blunts the arrows of divine conviction of sin. It resists sanctifying grace bestowed upon the Christian. It destroys a sense of moral responsibility, and leads its devotees to spend money more cheerfully for its debasing sensualism, than for the glory of God.

If the apostle had found tobacco-using to be a habit of those times, especially in the church, requiring more than five times as much money as was given to Christ and his cause, he doubtless would not only have called it a "foolish and hurtful" lust, but one that he would have pronounced and denounced as "earthly, sensual, devilish." He would have felt constrained to say to Timothy, "flee youthful lusts," and especially that most enslaving one, the love of tobacco. He would have called upon the churches in general to cease burning incense on such a filthy, unholy, and expensive altar. He would have earnestly entreated them to cease defiling the body, which is the temple of the Holy Ghost; to cease ensnaring the soul set free by the blood of atonement; and cease annually robbing the church, the banking-house of Christ, of \$5,000,000 of money. O, when—when will the church wake up to see her great bosetting-sin of the present day?

There must come a revolution on this subject; and the question to be answered is, Will the church come up to her duty in such a moral reform? She ought

to take the lead in all reforms adapted to promote true religion and the extension of the Gospel message to the world. Will she enlist as pioneer in this moral enterprise? Will her ministers come to the rescue? Or will they, as too many ministers and churches did in the temperance effort, display an ungodly cowardice, fearing to ply their moral forces to the ear of reform, till they see it well in motion; then, fearing to be left behind in disgrace, jump aboard on the very last end of the train, and ride in their glory to the summit of triumph, by the momentum gained by the exertions of those who profess no allegiance to Christ, but are mere friends of humanity?

If we would elevate the piety of the church, we must persuade its members to put away various sensualities which nullify the force of truth, and neutralize their spirituality. The church must act upon principle, in eating and drinking, as well as in preaching and praying. When she shall be governed by principle in all things, then will her standard of piety rise,—then will she be emphatically the light of the world. When she shall turn the channel through which \$5,000,000 flow for that which not only is a needless waste, but which crowns the climax of her idolatries,—when she shall turn this channel into the Lord's treasury, for Bibles, and tracts, and Sabbath-school books, and the preaching of the Gospel at home and abroad,—then will she appear in the ‘brightness of the morning, fairness of the moon, clearness of the sun, and terrible in strength as an army with banners.’

## PSYCHOLOGY OF MAN.

PSYCHOLOGY is a term derived from two Greek words : *Psuche*, vital spirit, and *Logos*, discourse ; meaning, primarily, THE SCIENCE OF THE VITAL SPIRIT.

Man, in his present form of existence, is a compound being. He possesses a three-fold nature,—a human trinity,—not inaptly analogous to the Trinity Divine. He possesses, first, a physical nature,—a body “ fearfully and wonderfully made ;” fitted to its animal functions ; secondly, he possesses a vital principle,—a spirit of natural life, adapted to govern all the voluntary and involuntary movements of organized existence ; thirdly, he possesses a moral nature,—a rational soul, capable of recognizing the moral quality of action, and susceptible of moral culture.

This three-fold nature in man is recognized in Scripture. Paul says, Thess. 5: 23, “ I pray God your whole *spirit*, and *soul*, and *body*, be preserved blameless.” He here uses three Greek terms : *Pneuma*, *Psuche*, *Soma*, to express the entire man,—his rational, and vital, and organic nature. The distinction between the rational and vital spirit is often made in the Old and New Testaments. The terms *Pneuma* and *Psuche* are frequently used in

the New Testament without discrimination, to express the rational nature. But generally in the Septuagint, and in several passages in the New Testament, they are distinctly applied to the rational soul and the vital spirit: *Pneuma* to the former, and *Psuche* to the latter. Whenever the Spirit of God, in either person of the trinity, is spoken of, *Pneuma* is the word used. The ancient Grecians used these terms in the same distinction. The *Psuche*, in the Pythagorean and Platonic philosophy, was the vital spirit,—the seat of the senses and appetites common to man and beast. The *Pneuma* was the rational nature, belonging to man alone. This distinction, as already intimated, is generally kept up in the Septuagint, and in several passages in the Greek New Testament.

In this treatise the terms *soul* and *spirit* will be used in their ordinary popular sense, to denote the rational and moral nature. In speaking of man's middle or psychical nature, it will be convenient to denote it the Vital Principle, the Electric Force, the Nerve Power, or by some corresponding phrase. These terms may express to many somewhat different ideas; and it is not intended to use them for the purpose of philosophical precision, but for the want of terms which might perhaps be considered less objectionable. If the term electric force be thought objectionable, it should be recollect that electricity has evidently much to do with the functions of animal life. It may be in a much more subtle form

than that contained in inanimate substances. Vitalized electricity may be of a much higher quality than that found anywhere else in nature.

If vitalized electricity and the vital principle are different, they are so intimately connected that the latter cannot be maintained without the former. It seems identical with that which has been called nervous fluid. It is plainly the medium through which, not only the voluntary and involuntary forces of animal life are carried on, but the medium through which our mental and organic forces act and react upon each other. This refined electric substance may possibly be, for aught we yet know, the very *Psuche*, not only of the Grecian philosophers, but of the Author of the Holy Word. The points now to be considered are, the bearings of Psychology in Human Character, in Human Origin, in Self-Control, and in Controlling Others.

#### PSYCHOLOGY IN HUMAN CHARACTER.

The seat of the psychical principle is located in the brain. Here is the basis of the nerve power which controls all physical motion, and is the source of all sensation. The nerve spirit is not only seated in the cerebral organ, especially in its base, but it pervades the whole range of the nervous system. The brute creation possess also an intangible electric spirit, with which are connected certain faculties of perception and volition, which are susceptible of edu-

cation. They have a two-fold character,— organic and sentient,— but are without the rational and moral nature. “The spirit of man goeth upward, the spirit of the beast goeth downward to the earth.”

Viewing man as a psychological being, as well as moral and organic, would seem to settle forever the controversy long entertained between those who consider him, at death, as entering at once into a state of conscious existence, and those who hold that he sleeps in the grave until the resurrection. As a rational being, he unquestionably enters immediately into conscious spiritual existence when the body dies. But the spirit of animal life doubtless sleeps in the grave with the dust of its own former tabernacle, until the resurrection. In this vital spirit our personal identity seems to consist. And by virtue of this identity, we maintain for a long life a uniformity of physical conformation,— the same general form and proportion of body, and the same individuality of face.

Our personal identity cannot consist at all in our material organism. If it did, then we should entirely lose our identity once in about seven years; for all the elementary substances composing our bodies are constantly undergoing change. The matter of which we consist to-day is being given off, and other matter taken in to supply its place. Once in about seven years, by this continued process, the entire matter composing our frame is exchanged. No one of us is composed of the same material which he

was about seven years ago. In another period of the same length we shall each one of us become materially a new being. Yet, during all these physical changes which we go through during a long life, being taken first from the earth, and passing through ten material transmutations in seventy years, we are each really the same individual,—our identity consisting, as just stated, not in the material man, but in the spirit of his animal life.

In this spirit of life will consist also our identity in the resurrection. When the soul leaves its tenement and returns to God who gave it, the body returns to its original dust, by giving off its elements to become the component parts of other material substances. At the resurrection these elements could not, by any known law of nature, be gathered up again, to become the same material bodies which were laid in the grave. The vital spirit which sleeps in the grave, will come forth in the resurrection, clothed in a body, not of the same material as that which entered the grave, but with a body such as shall be given it. Paul happily illustrates this subject by referring to the grain sown in the field. The planted kernel decays, and gives off its elementary principles. These same elements do not enter into the new kernel; but the vital principle contained in the germ, which dies not, clothes itself in other elementary principles of the same kind, and comes forth in a new kernel. So the mortal body dies, dispersing its material substances never more

to be united as before ; but its germ, the vital spirit, comes forth clothed in a body not made of the same material,— “ but God giveth it a body as it hath pleased him.” He will then clothe that spirit with a body of finer materials than those which now invest it. “ It is sown a natural body ; it is raised a spiritual body.”

#### PSYCHOLOGY IN HUMAN ORIGIN.

In the origin of life and its reproduction, the psychological principle is deeply involved. In the beginning man was formed of dust ; that is, the elements composing his physical constitution were taken from materials already created ; his formation depending on the same philosophical principles as the formation of any other living body in after time,— the elements forming him being gathered at once, and the elements forming other bodies being gathered by degrees. “ And the Lord God formed man of the dust of the ground.” All the bones, soft solids, brain and nerves, heart, arteries, veins, and the blood filling them, and every other part, were now ready for motion ; but, as yet, the machinery had no power, because there was no spirit of life. Now, it is added, “ and breathed into his nostrils the breath of life, and man became a living soul.” The primary meaning of “ living soul ” is, living being ; — one that has the spirit of animal life. When the action of the nerve power and the process of

breathing commenced, he became a fully developed living being. The evidence contained in this general account of the origin of man, of his having a higher nature than that of other animals, is not found in the passage just quoted; but in the fact so distinctly stated, after all other animals had received their origin, that he was made "in God's own image," and "after his likeness."

The philosophy of reproduction of beings is, as already intimated, identical with that of man's primary origin; except that, in the latter, the action of the nerve power and the process of breathing must have been nearly or quite simultaneous; while in the former the action of nerve power is earlier than the process of receiving air into the lungs. The life, or nerve power, commences with the first act in reproduction. The sympathy between the sexes is electric; and the orgasm produced by their union is that electric sympathy brought to a crisis. This process gathers from the paternal brain and nerves concentrated nervous fluid, or vitalized electricity. This germ of the future being, when subjected to microscopic examination, manifests life; and when produced from a healthy, vigorous body, exhibits great activity.

When this life principle, or spirit substance, is received by absorption into the maternal ovum, there commences the process of gathering material for the formation and the development of its corporeal character. This material, prior to its birth, is gathered

from the mother. Its corporal substance is a part and parcel of herself. Its spirit substance originates in the father ; its corporal substance originates in the mother. The father's psychological character communicates health, or disease, prior to conception. The mother's psychologic nature communicates health or disease, after conception. They both, during the period of gestation,—the mother directly, the father indirectly,—exert influences psychologically upon their coming offspring, which, during all after life, will show themselves in its physical, psychical, and moral character.

If the father, by violating a law of his own organic life, produce an abnormal condition of his electric forces,—if, by the habitual use of alcohol, or opium, or that stronger poison, tobacco, he send a morbid thrill through his electric spirit, pervading all the nerves of his body,—the concentrated nervous substance, which is the germ of the future being and forms the basis of its future constitution, must be, in a greater or less degree, in an abnormal state. If he be a great user of flesh-meats, and thereby, as must be true in all cases, give greater grossness to his physical, intellectual and moral nature, he transmits a measure of that influence to the child which proceeds from his loins. If the mother live at warfare with her own being, by the use of stimulating drinks, such as tea and coffee, or by stimulating food, and thereby induce a morbid state of nerve, manifested in unhealthy excitability, or in drooping

energy and premature age, she may be sure her child,—made of her own organic material,—must share with her the penalty of violated law. Her habits of thinking and feeling—which will always be affected by her habits of eating and drinking—will, even during her gestation, aid in giving a stamp of character to the being she shall bear, never to be wholly eradicated.

#### PSYCHOLOGY IN SELF-CONTROL.

THE WILL.—that faculty by which sentient beings of every grade decide to do, or not to do—evidently belongs to the middle or psychologic nature. The will is a faculty belonging to all sentient beings. In the brute, it always decides according to instinctive and natural impulse. In man, it always decides according to animal impulses, or according to motives from the rational and moral nature. When it is guided by normal animal appetites within the limits of moral law, its decisions are right. When it yields to abnormal appetites, its decisions are wrong. Where it is under the guidance of the soul, it may decide right or wrong, according to the moral condition of the soul, and the motives suggested by it.

The human will, however, is not a slave to any certain motive from any quarter. If it were, then man's moral agency and accountability are moonshine, and all moral law a nullity. Man, in the exercise of this faculty, with proper light, is ever able to choose the good or the evil. A corrupt

heart, or a depraved appetite, may urge its petitions on the one hand, and enlightened reason and a healthy conscience may present their claims on the other; but it is for the will to decide which shall prevail. In this consists the freedom of the will—the power of choice between motives. With this freedom,—the basis of all moral responsibility,—man is able to lay hold of the means of self-culture for the present life, and the richest gifts of heaven for the life that is to come; or to yield to other motives, and tread the path of ruin. He is able to say to the strongest tempter, "Get thee hence, Satan," or to the most powerful appeals of Holy Moral Suasion, "Go thy way."

No intelligent man is possessed of such an inborn character that it cannot be governed and modified. And no habit of morbid appetite can acquire such strength that a sane man cannot overcome it. But there is often a long warfare, on the subject, between the animal and the rational forces of his being. Here is a man devoted to the false and irrational indulgences of alcohol, opium, or tobacco. Reason says this is a vile practice; killing to the body, energizing to the mind, and paralyzing to the soul: a habit which no rational or moral man ought to indulge for a moment. But the cravings of the lips cry for continual sacrifices to be laid upon the altar. Conscience says this is sin,—let it alone; but the defiled mouth says, "Give, give." Is that vice so powerful that it cannot be overcome? Let that

powerful agent, the WILL, dwelling in the citadel of the electric forces, send out its telegraphic message to each hand, commanding it never more to degrade the mouth, and insult the soul. When the sordid love of gold tempts the hand to take from the banking vault a pilfered treasure, let the will heed the munitions of moral precept, and give that hand command to touch it not; and it will obey.

Man's moral constitution does not consist of nicely-arranged machinery, carried by the steam of influences of which he has no control. He is not sailing on seas of chance, without ballast or rudder. He has the power of choice between good and evil; the power of self-government; he can conquer himself. And, "He that ruleth his own spirit is better than he that taketh a city." He can be, in a large degree, the former of his own character, and the controller of his own destiny. He may be born with hereditary predispositions and unbalanced tendencies; he may labor under educational embarrassments and ill-favoring circumstances; yet, through the promised aid of Heaven, by a determined will, in the warfare of self-culture, he can triumph. But, to accomplish this, there are two things to be observed. One is, keeping the avenues to the soul open for the reception of truth. The other is, allowing truth its practical bearings.

The first step in self-culture is, keeping the avenues of the soul open for the reception of truth. We often form prejudices against a new truth, or a

new application of an old truth, which comes from early habits of thinking; these are often great barriers in the way of human progress. Great hindrances are found, too, in long-indulged appetites, which truth and duty require to be sacrificed on the altar of self-denial. A man, long addicted to rum or tobacco, is not often open to conviction of its destructive properties. It takes a lover of strong meats a long time, with abundant facts and science before him, to be convinced that this kind of diet tends to lower the tone of the mental and moral character. These prejudices of appetite must be long enough laid aside to allow the eye of mind to see clearly the facts and evidences in the case. There must be a willingness to let truth and facts speak for themselves.

The avenues to the inner man more particularly referred to here, however, are those found in the nerve spirit and its sympathies. These form the main-spring in human life. The nervous system—the dwelling-place of the nerve-power—is the bond of union between the living body and the soul; it is the medium through which the physical and the rational natures communicate with each other. Whatever mars the healthy circulation of the electric currents in the nervous system, lessens the strength of the vital forces; and, through them, deadens the native susceptibilities of the soul. The nervous system is the only medium through which truth can reach the interior man. Divinity himself uses no

other medium through which to reach the human heart. No light from earth or heaven, can affect the interior life, except through this great medium. The nervous senses are so many avenues through the tabernacle to the dweller within ; the nerves of sense are so many telegraphic wires communicating to the soul.

No message of moral worth from earth or heaven can forcibly impress the drunkard's heart. The electric wires have lost, by morbid excitation, their natural vibratory tone. Every stimulant, or narcotic, by producing an abnormal condition of electric force, lessens the practicability of reaching effectually the inner man. The opium-eater as truly shuts in his heart from the reach of moral improvement, as he who sips the contents of the bowl. The tobacco-user as certainly wars against the progress of his soul, as he who worships at the bacchanalian altar.

The young man who chews, or smokes, or snuffs tobacco, for the unnatural exhilaration which it gives to the nerve spirit, or to soothe an agitated or uneasy mind by its narcotism, lowers the tone of his susceptibility to moral improvement. No moral and holy impulses can now reach his interior nature, as when this medium was in a healthy state. Besides this, vulgar physical habits lead to vulgar words ; and these, conjoined, lower the standard of moral feeling and refinement. There is no surer indication of want of true mental refinement, and no surer way of increasing that deficiency, than a resort to

such a sordid habit for mental enjoyment. Young lads who adopt such practices while the vital spirit is so tender, will never become fully and rightly developed men, either in physical, intellectual, or moral character.

Another thing to be observed in self-government is, allowing truth its full practical force when its messages are understood. There are very few persons who really hold proper government over themselves; very few govern themselves where public opinion, or fashion, happens not to condemn them; very few deny themselves for the sake of mere moral obligations. Moral principle, when it conflicts with long-established appetite, is generally exceeding weak. And there is no appetite so enslaving to the higher principles of man's being, as that which is strictly created and abnormal. Men often seem fully convinced that tobacco-using is a violation of divine organic law, and a sin against its Author; and yet, in spite of all moral and physical obligations, they foolishly say they cannot overcome it. Why is it they feel so unable to control such a low and loathsome habit? It is because the animal portion of their being has gained ascendancy over all their higher nature.

Here is the difficulty with thousands. Thousands drag out an unprincipled life; thousands sink into irretrievable ruin; because they have so pampered their natural appetites by undue indulgence, or so long have yielded to unnatural ones, that their govern-

ing force has become perverted ; the unnatural passions of the lower nature have taken, by brute force, the guiding reins ; that governing power, which was originally, and ought ever to be, the agent of the rational man, has become the menial servant of brute appetite. Sensuality has now cast a cloud over the prosperity of the soul. Instead of being governed by enlightened reason, refined taste, or a sensitive conscience, brute appetites—and those even below the range of brutes—hold the soul in the lowest bondage. Now, instead of being ruled strictly by moral principle in all things, the man is led captive by licentious liberty. And, when this licentious liberty becomes able to stem the current of moral obligation in one form, it accumulates strength to resist and repel the plea of virtue in any other form. Therefore, moral principle in all things, whatever may be their magnitude,—moral principle, sternly adhered to, becomes the only safeguard of the soul. Moral principle requires that we reject the use of all stimulants, and all narcotics, as luxuries. Why ? Because these in all cases produce a morbid condition of the vital force ; and this state, except for occasional remedial purposes, is always injurious to every department of our being. Therefore, their use as luxuries is a violation of moral principle.

Every man is morally bound to know and obey all the laws of Deity revealed in his physical being. Such a course of living should be adopted as will secure to him the highest ultimate welfare of the

body, mind, and soul. The unnatural pleasure of a wrong indulgence should be set aside for that higher and natural enjoyment, which is always the immediate or the ultimate result of obedience to nature. Nature is right; the Author of nature has made a wise and perfect arrangement; and whoever thinks of bettering his condition by warring with that arrangement, is guilty of the grossest folly. Let every man, therefore, gather up moral courage, not only to be open to the conviction of truth, but to meet its demands. For there is no moral being who really cannot govern himself.

We are bound, also, to allow truth its full practical force in the management of those committed to our charge. It is our prerogative to decide what is best for our children; for they, as yet, in respect to moral obligation, are a part of ourselves. Thousands, instead of being governed by any fixed principle in this matter, only study their present gratifications, without looking forward to its future and final bearings. They should always be indulged when that indulgence will not militate against their present or future well-being. And when it is necessary to refuse them any desired gratification, a reason should be given them. They should be early taught the nature of their being, and their moral obligation to the laws which govern it. In this way we instil into their minds also, the principles of self-government and self-culture.

The guardians of our literary institutions have a

responsibility in this matter. No student should be admitted to the privileges of any institution of learning, who is guilty of intemperate and loathsome habits, which degrade the standard of his physical, and mental, and moral nature. The young, in all conditions in life, should be trained to those dietetic habits which secure their highest physical and moral welfare. If, instead of indulging them in the modern custom in America, of monstrous meat-eating, they would bring them up mainly or entirely on breadstuffs and fruits, a mighty change would be brought about in their physical and moral standard. Every one knows; who has taken pains to inform himself, that the meats contain no element of nutrition for the strength and vital force of the body, which is not derived from the vegetable world ; that the grains, and other edible vegetables, contain all the elements that are in animal flesh, and in a much purer state. If any would still doubt this, let him read Liebig's Animal Chemistry, on this subject. He shows, by chemical analysis, that the primary elements, necessary for nutrition and vital force, contained in the vegetable kingdom, are the same as those contained in the animal.—See Liebig's Animal Chemistry, page 22, and onward.

Another fact is known to those who are open to conviction on the subject, that the stimulating property of meats, which is not essential, but ultimately detrimental to vital force, so acts upon the brain, especially on the lower and posterior part of it,

as not only to dampen mental vigor, but to lower the standard of refinement and moral feeling. Young persons brought up on meats are more likely, other things being equal, to become addicted to low habits of thought, and feeling, and action; to earlier developments of sexual desire; and even to vulgar and licentious practices. Hear the testimony, on this general subject, of the Rev. Dr. Potter, before the Lowell Institute.

"The mind is a reflection, often, of the character of the food we eat. Thus, those animals which live only on flesh are furious; those that live on herbs are gentle; while those which are omnivorous are of different grades, from gentle to savage, according to the quality of their food. Travellers have noticed the change that a constant use of buffalo-meat, for several months, will make, in the trappers of the west, from mildness to rudeness. And these facts may be of use, not only in the training of the young, but in the efforts of adults to benefit themselves, and curb their dispositions."

Is meat necessary to give force of character? If, by force of character, we mean brute force,—savage ferocity,—meats are essential. But does the Indian possess more energy of character than those who eat far less of meats? Look at facts developed in past American history. Any one who will candidly study the character of nations will find, all other things being equal, that the more their living was composed of meats, the more fero-

cious and savage, and the less really courageous, forcible and enterprising, was their general character. And whoever will study facts in private life will find, other things equal, that those devoted to flesh meats are more inclined to sexual extravagances ; and that libertines and prostitutes are not only lovers of strong drinks and narcotics, but have a great tenacity for the strongest meats.

#### PSYCHOLOGY IN CONTROLLING OTHERS.

By the same attribute of our middle nature,—the WILL, by which we control ourselves,—we bring others under our influence. On the same philosophic principle through which we govern our voluntary physical movements, we influence the physical movement of others. On the same principle by which we command the direction of our own thoughts, and thereby our emotions, and ultimately affect our own character and destiny—by exertion of the same electric will, we affect the thoughts, and emotions, and character, and destiny of others.

The thoughts and emotions of the gestating mother's mind, as already intimated, affect deeply the character and destiny of her yet unborn child. The father's thoughts and emotions, through natural or articulate language, communicated to the mother, produce in a degree the same result. During the child's infancy, the parent, especially the mother, is breathing into its sentient nature the natural spirit

of her own being. Through her electric forces, she is enstamping the features of her own present character upon the disposition and immortal soul of her offspring. When hushing the little one to quietness, or to sleep, it feels her magnetic wish upon its own electric sympathies, and yields to its power. During childhood and youth, when its untutored mind becomes fretted by uncongenial incidents, the mother's soothing tone of self-governed feeling, sends its sanctifying electric thrill over the disturbed current of its soul, saying, "Peace, be still."

In all our associations in life we act and react upon each other by electric impressions. In private and in public life, this law in social intercourse prevails. The preacher and the orator impress their hearers, not merely with the power of abstract truth, but with the electric force of their own zeal. If the speaker feel, the whole audience feels. Hence the importance of extemporaneous speaking. Every speaker should thoroughly study his subject,—get his own spirit thoroughly imbued with it,—and then, by clothing it mainly by extemporaneous speech, his own spirit, stirred by well-digested thought, finds its way through the electric sympathies of his auditors to their hearts. His whole frame feels, and sends off its electric power in every gesticulation. He may read his discourse, clothed in labored words; but there can be little stir of electricity in his own spirit; and what there is, is absorbed and lost in the carefulness of reading; and his congregation feel lit-

tle else than, perhaps, an admiration of the speaker's style of composition.

An elderly clergyman once said that the best evidence of a man's call to preach, was contained in the answer to the question, Does he preach? Every educated man can write and read a discourse; and all the inspiration he particularly needs, or can generally obtain, for its presentation, consists in having good eye-sight and the power of utterance. But can he preach? If he does, there is evidence of his call; if not, the evidence is against him. How does a lawyer obtain the full force of the merits of his client's case on the mind of the jury? Not by reading a carefully written essay before them, but by rousing the electricity of his own brain with his subject matter, and throwing that electricity upon the telegraphic wires which communicate with the very souls of those jurymen by extemporaneous speech.

The public speaker who possesses the stronger electric power, other things equal, will hold his audience under the greater magnetic spell. And in proportion as his own soul is baptized with the spirit of his subject, and his gestures grow out of its inspiring power upon its own heart, will be the sway he will hold over his hearers. In proportion to the increase of his own internal pathos, will his words glisten with the lustre of true eloquence; while, from the very ends of his fingers, are thrown off scintillations of electric force, which are taken up by magnetic absorption into the souls of his auditors.

ANIMAL MAGNETISM, or that electric control which one person may have upon another who consents to be a subject of it, has been proved beyond all question, by a great variety of experiments. Some are so far susceptible to such influences that they become entirely controlled in their physical and mental action. In a perfectly wakeful state, when no mesmeric sleep has been induced, their physical motions, like those of our own body, and by the same cerebral force, can, for a space of time, be brought entirely under our power. The man's hand can be made fast to the wall ; and he himself cannot remove it. He cannot rise from his chair, though perfectly awake, without the consent of the operator. If he take his pen to write his name, the operator can will him to write some other name, and that other name will be written, in spite of all his efforts to the contrary. The pen is in the hand of the subject, but under the control of the operator. He may sit, pen in hand, passively, or with the determination to write a certain sentence ; and in either case the handwriting will be whatever is dictated by the operator. These facts, and numerous similar ones, are familiar to everybody whose spirit of inquiry has prompted their investigation.

In the same way in which we electrify our own muscular motions, we also get the electric control of the muscular system of others. We obtain access, as it were, to the great office of telegraphic communication belonging to the subject, and get the

management of his forces into our own hands. Instead of his commanding his own physical motions, we hold the government of his system ourselves. In this way we can, not only command his motions, but in a large degree the strength of motion. A magnetized man, by the operator's command, can exert twice or three times the strength which he could ordinarily exhibit. Strength in the living man's muscular fibre does not reside simply in that fibre itself, but in the force given to it by the exertion of electric will from his own mind, or that of another, or from both combined.

Electric control may also be obtained over the brute creation. The Lion-tamers and Lion-kings operate on this principle. Serpent-tamers can, in this way, take the most venomous serpent in their hands, with impunity. The brutes themselves instinctively charm each other by magnetic power. The serpent charms the bird within his reach. Unruly horses and other domestic animals can be governed by a kind of magnetic discipline. One man who has subdued an animal in that way, may control one which is entirely unmanageable in the hands of another man. Circus-riders so electrify their horses that their sentient nature is brought under the control of the rider's will.

The senses can likewise be controlled. After the electric forces of the operator have gained ascendancy over those of the subject so as to control muscular action, then follows the power of hallu-

cinating the senses. Give the subject a glass of water, calling it brandy, and to his sense of taste it is brandy, and produces all the apparent fruits of deep intoxication. Give him flour, calling it ipecac, and to his taste it is ipecac. In the same way, the operator can pelt him with a hail-storm ; shoot him prostrate with a feather ; or bleed him to fainting with a straw. Sometimes illusion is produced upon a whole congregation. Some feats of jugglery have doubtless been performed in this manner. A man in London made an experiment of this kind, by placing himself in a public square, fixing his eyes intently and with the gaze of surprise upon an elevated figure of a lion. Soon a crowd was gathered, with their eyes as intently fixed. At length the man exclaimed, "It moves ! — it moves ! — its tail is waving in the air !" and all around him voices responded, "Sure enough, — it moves ! "

Persons of peculiar electric character, are able to produce the same kind of influences on themselves, without being conscious of doing so. Give certain persons a sponge moistened in water, while they suppose it to be chloroform, and the effects of the latter will appear. Give them the vapor of water, while they suppose it to be exhilarating gas, and the effects of the gas will appear. In this way, bread pills have often had great sanative agency. In this way, Dr. Warren's patient, with a tumor on her neck which he advised to be amputated, was removed by her applying to it a dead man's hand.

CLAIRVOYANCE is produced by electric changes, abstracting the mind from its dependence on the body for its perceptions. Put one who is susceptible of this change into the clairvoyant state, and all the senses act without organic agency. The mind's eye sees what the organic eye cannot reach. No material substance intervenes its scope. The electric spirit can be sent whither the operator will, and bring back intelligence which is not in the mind of any one present. A *good* clairvoyant — an agent rarely found — in a perfect state, — a condition seldom obtained, — can read a name on a sign a hundred miles off; or, can tell the symptoms of disease by a lock of the patient's hair, with any distance intervening between the subject and the patient. But while they are often correct and explicit, they often make egregious mistakes; so that their testimony can in no case be positively reliable. Clairvoyant writings, or discourses, can be looked upon as curiosities, but should never be taken as authority.

The clairvoyant state is often self-induced, — sometimes designedly, and sometimes unconsciously. In this peculiar state, which it may be they were unable to explain, some have undertaken professional fortune telling. By mental sight they sometimes see correctly things that are past, which astonish their weak customers, and inspire them with the confidence that they are able to prognosticate the future. They are frequently able, also, to read the thoughts and feelings which now occupy the

mind of their inquirers, and draw deductions from such premises relating to what may possibly transpire. But no clairvoyant can abstractly foresee an event. He cannot see what is not, or has not yet been, a real fact. A past event, or a present fact, may be seen; but no human mind, however highly or perfectly clairvoyant, can look into the future, and foretell its results.

There is, too, a kind of natural clairvoyance. The daughter of a relative, aged eight years, awoke at nine o'clock in the evening, affrighted, and weeping bitterly, saying, "Father's horse and carriage have gone off the bridge. See! — do see! Father is dreadfully hurt." The morning developed the facts precisely as stated by the child, as having occurred at the hour of her alarm. Let several persons who are natural or induced clairvoyants meet together, and they may become mediums of a degree of clairvoyance in others in the same circle; so that the latter are able to see the very same things that illude the vision of the former.

Great commotion in electric currents is often produced when persons of this character meet together, not only upon susceptible *persons* present, but upon inanimate substances. And sometimes these seem to give forth, by the aid of clairvoyance, manifestations of intelligence. On the power of disturbed currents of vitalized electricity upon inanimate substances, there is evidence from various authentic sources. E. C. Rogers, Esq., in his "Philosophy

of Mysterious Agents," has given many well-authenticated facts on this matter; among which are the scientific investigations of M. Arago, of France, reported to the Paris Academy of Sciences, concerning a young factory girl, who had been supposed by her companions to be possessed of a devil. Three or four of these facts must here suffice. "She can touch no object without breaking it, or throwing it on the ground. All the articles of furniture which her garments touch are displaced or overthrown. At that moment many persons have felt, by coming in contact with her, a true electric shock. She is affected by jerks, unusual movements, and a kind of trembling which seems to communicate itself to the hand which touches her. She possesses, moreover, a peculiar sensibility to the action of the magnet."

The marvellous knockings and other noises of haunted houses, in past times, have, in some cases, been traced to some peculiar influences coming from the presence of certain individuals. Sometimes tables, and other articles of furniture, with weighty substances upon them, have been moved without personal contact. All know that if simple aerial electric currents become disturbed, as they often are in a thunder-shower, they exhibit tremendous power. So, disturbed currents of vitalized electricity may give loud rappings, or move heavy substances. And these currents are often influenced by the will and thought of persons present.

All these various developments of our electric nature give some clue to the natural philosophy of those agencies called Spiritual Manifestations. It is not strange that those who are unacquainted with this part of the science of life should be surprised by these manifestations. But it is every one's duty to know the true science of this matter ; that he may intelligently eschew a delusion which is sending scores to the insane asylum, and degrading hundreds from the true standard of Christian faith, to the platform of gross infidelity. The delusion, in this case, consists not in the manifestations being untrue, but in calling that which belongs to natural science, the work of supernatural agencies. It is passing strange, however ignorant they be of science, that common-sense men should be willing to leave the plain and positive teachings of that Book, which has for ages borne the severest tests of fire, and sword, and revolution, for the teachings of such low, and frivolous, and contradictory revelations as are said to come from the spirits of the departed. If it were admitted they are spirits, they certainly are those of the lowest order ; many of them having far less dignity and intelligence than when they occupied the body. And they must be, at least generally, lying spirits ; for they not only conflict with God's great standard of truth, but greatly and essentially contradict themselves. How much better that we take for our guide the Book of Books, and rest our faith on the Rock that is higher than man !

## CONCLUSION.

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THIS work has been written with the strongest desire to accomplish good to the physical and moral welfare of those into whose hands it may fall. The motives which have dictated this effort and that of promulgating this subject by public discourses, together with the use that shall be made of it by those who read or hear, will be matters more fully developed in the light of eternity. This, or any other work on this subject, will be of no practical use to those who are determined, in despite of truth and their highest temporal and eternal interests, to disregard it. It is written for those who desire their own welfare enough to seek for it.

Living right, and reaping the consequent reward, is, as a general rule, within the reach of all who will inform themselves. Whoever defrauds himself in this, can have no consolation but in the contemplation of his own folly and deserved punishment. Are health of body, vigor of intellect, and elevation of soul, desiderata worth living for and securing? Are a few grovelling sensualities and degrading vices worth more than soul and body? Are the depraved gratifications of the mouth worth more than a sound constitution and a well-balanced soul?

All desire to be happy ; and, though we live in a fallen world, such an end is attainable. But it must be sought in the right way, and from the right source. Some seek for it in the deceptive glitter of gold dust, but are never satisfied. They seek it even at the expense of physical and moral obligation, and lose both soul and body in its pursuit. Some seek it in the lustings of the mouth, and consider its demands, however unnatural they may be, of more importance than health or life,—sacrifice themselves upon the altar of sensualism, and go to the judgment charged with self-murder. Others seek it in devotion to pride, ambition, and other earthly and hurtful propensities. But what does it avail ? Though the thirst of these sensualities is seemingly quenched, yet it burns on with increasing ardor ; though their pride and ambition are gratified, their hungerings are not quelled ; though they conquer the world, they weep for a wider grasp of power, and die intoxicated with their own folly.

In view of these facts, which the eye of every observing and reflecting mind can see, the question instinctively arises, What is the true source of human happiness, and how is it to be sought ?—for such a boon Heaven has made attainable. The question is easily answered. Let Wisdom utter her winning voice,—let her mark out the path :—“ Her ways are ways of pleasantness, and all her paths are peace.” The keeping of divine law, wherever that law may be written,—whether relating to the body or the soul,—“ is the beginning of wisdom ;” and whoever keeps

within the plain limits of that law will find, amid all the annoyances of a fallen world, his way happy and joyous ; but whoever steps over that line, will find ultimately that every step thus taken has been productive of pain. "Good understanding giveth favor, but the way of transgressors is hard."

Many are the besetments which lurk about the footsteps of young men. Temptations are on every side ready to ruin their prospects for time and eternity. Let them beware, and give the adversaries of their mortal and immortal being no advantage. If a young man would seek his highest earthly good, he must look for it in the path of obedience to the laws of physical life. When he studies the divine law of his physical being, and keeps his footsteps within its limits, he finds a path filled with the choicest fruits for the comfort of the body and the mind ; and while walking here, he is more likely to be impressed with the benevolent demands of that law which is the counterpart of nature — the law of Revelation.

The Author of Scripture is the Author of natural law. The path of obedience in natural law is in direct line with the path which leads to heaven ; and he who pursues carefully the former, is more susceptible to the moral suasions which Divinity has cast upon the latter. A body that is converted from the error of its ways, measurably prepares a fallen heart to receive renovating grace. Then, with a body and a soul in harmony with the laws of Deity, — with a sound constitution, the greatest earthly prize, — and a

soul made rich by its title to heaven, he can enjoy this present life, and secure a foretaste of that glory which awaits their immortal union.

Then, with a body holding Nature's policy of health insurance, and a heart reposing on the promise of final redemption, he can pull fruits and flowers which no frosts can blast, and can see, through the short vista before him, the golden streets and Elysian fields which wait his arrival. Then, whether this world shall continue or cease its rotations, — whether smooth seas and friendly winds speed him on, or all be lost by wreck and founder, — he holds a claim — the gift of Heaven, — on imperishable wealth, — a claim which neither men nor devils can nullify or wrest from his grasp, and the flaming elements of a burning world cannot consume.

The main hope of accomplishing good by a reformation in physical habits, rests on the rising generation. Men who have long addicted themselves to vicious appetites, can scarcely be reached. They are joined to their idols — we can only let them alone. There are, too, many young men who either inherit a low state of moral feeling, or have, from childhood, indulged such a reckless, unprincipled spirit, that no hope can be entertained of them. We must look, then, chiefly to those just entering the stage of existence, whose characters have not had a chance to take a wrong mould. This main hope throws an immeasurable responsibility on those who have charge of the young, — upon parents, upon guardians, upon teachers, and, above all, upon mothers.

Will the mother, who is chiefly concerned in giving a right physical and moral character to her child, wake up to her Heaven-instituted responsibilities? Will she bear in mind, that whatever she may have done in giving physical and moral tone to her offspring before its birth, she owes a duty now to it, to herself, and its Maker, from which she cannot swerve, but on the peril of its temporal and eternal destiny? Will she take the first step that can be taken to secure its physical and moral welfare? Will she see that nothing gains access to its lips, which can oppress and hinder its right physical and moral developments? — that nothing shall find admittance to the digestive and nervous forces, which may thwart her own future efforts at moral culture, and resist the teachings of Heaven?

Let her remember that every day she is bringing or allowing influences to bear upon her sons and daughters, which are materially forming their characters for weal or woe, for time and eternity. She is sustaining or impairing the tone of the stomach, which materially controls the physical and moral constitution of that son whom God has made for some valuable purpose in life. It remains for her, in a great degree, to say whether he shall be allowed to answer that purpose, or whether he shall be turned out of Nature's path into physical and moral imbecility or ruin. Let her see that nothing shall jostle his nervous system, and consequently his soul, — that strong drinks and narcotics do not lead his lips and tongue into profanity and falsehood.

At the final issue of all human doings, that mother and son will meet. Has he been a low, miserable vagabond? — who must bear the responsibility? Did the Creator make him such? Nay — he was made a little lower than an angel. From whence came this change? Beside the inherited ills of the fall, his father who begot him was probably at fault in character and example; or the wrong physical training of others into whose hands he may have fallen, with his own wicked agency, has ruined him. But above all, who was his mother? What was her character and conduct prior and subsequent to his birth, and during his early life? All these things, together with his own responsibilities, will pass a review in the light of eternity.

But should he then appear as a benefactor of his age, having done good to men and honored God, then those who have contributed toward making him what the Creator gave him native talent to be, instead of allowing him to be crushed and buried in sensualism, will find occasion to rejoice. The mother of that son, whom she, with carefulness and prayer, has trained, physically, intellectually, religiously, for humanity and God, will have no small share of rejoicing on his account. Every faithful service he has done, every triumph of truth he has gained, every victory over error and sin he has achieved, every redeemed soul he has won, will be so many gems in her diadem of glory to shine for ever and ever.

## APPENDIX EXPLANATION OF PLATES

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### PLATE I. NERVOUS SYSTEM.

(Page 10.)

**No. 1. THE BRAIN: CEREBRAL PORTION.** The upper portion of this organ, called Cerebrum, is here exposed. The entire top of the skull is removed, and the Dura Mater — the strong outer membrane, covering the substance of the brain — is dissected off and suspended by a hook over the head. The scalp or integuments covering the skull, are turned down over the eyes and lower back part of the head. The divided rim of bone can be seen horizontally just above the turned-down scalp.

Here can be seen the convolutions, or bundles of brain, occupying the left side of the head, called the left hemisphere. No. 1 shows the perpendicular section of the inside of the same hemisphere. This figure presents the outside of the same division. This exposed portion, united with its corresponding portion on the other, unseen side of the head, makes that upper and larger part of the whole brain which is called Cerebrum. Another smaller portion, which lies in the back and lower part of the skull, is called Cerebellum. The dividing line between

the Cerebrum and the Cerebellum, runs horizontally from side to side of the head, corresponding to the line representing the section of the skull. Each hemisphere of the Cerebrum is subdivided into lobes, with division lines running from side to side of the head. They are called anterior, middle, and posterior lobes.

The Cerebrum, or upper portion of the brain, seen exposed in this figure, is about six or seven times as large as the lower portion, or Cerebellum. The upper portion is the seat of the intellectual and moral faculties; the lower, the seat of the animal propensities. The brain governs all the voluntary motions of the whole physical economy, by direct volition. The decisions of the will are communicated to all parts of the system, through the agency of the nervous fluid sent through the nerves. If a ligature be applied to a nerve leading to any particular part, that part is no longer controlled by volition.

The involuntary functions are dependent, also, not on the will, but on the same communication of nervous fluid. If the nerve which brings the brain and stomach into sympathy, be severed, digestion can no longer be performed. This is true, also, of the action of the lungs, and all other involuntary functions. Any substance introduced into the system, which produces a morbid condition of the nerves themselves, or the electro-vital fluid circulating in them, is gradually undermining the durability of vital force; and consequently cutting off a portion of natural longevity.

NO. 2. THE BRAIN: PERPENDICULAR SECTION. A section of this organ is here given, dividing it directly in the centre, from front to back, where Nature has made a division by a fold of the strong membrane, which surrounds the whole brain, called Dura Mater. These two divisions are called right and left hemispheres. This figure shows the inside of the brain, by this perpendicular section. Here is exhibited the interior of the organ of MIND, and the locality of the SOUL.

The wave-like folds which extend from the neck to the face in this figure, represent the outer portions of brain, or the soft substance divided into bundles of nerves, which are the location of the different faculties that make up the sum of human character. These have their distinct phrenological developments. About four fifths of their substance when analyzed are found to be a liquid, called neurine, or nervous fluid, or perhaps it might be called vitalized electric fluid, which is evidently the medium and agent of the developments of mind and soul.

Every influence of the will upon our physical system, is exerted through this medium. It is transmitted throughout the whole nervous system, carrying to every quarter the messages of the brain. Like the pure electric fluid transmitted by telegraphic wires, it carries messages back and forth through all parts of the human system. If the smallest member of the body be in distress, information is sent at once

to head-quarters, the brain, and an order for relief is immediately returned.

### PLATE II: NERVOUS SYSTEM.

(Page 12.)

THE NERVES IN GENERAL. This figure gives the nerves of the whole body, distributed to every part of the system, from the crown of the head to the sole of the foot. They are distributed into very minute ramifications, for the purpose of giving power of motion, and for communicating sensation, pleasurable or painful, healthful or morbid, to every minute particle of the system.

Upon these nerves, like so many telegraphic wires, sensations are transmitted from one part of the body to the common centre in the brain, called Sensorium Commune. From this head-quarters of telegraphic communication, are sent out the decisions of the will to every part of the system. If the nervous fluid be stopped by pressure or injury, then sensation and motive power cease, until the obstruction shall be removed. If a limb gets into what we call sleep, it is caused by this nervous fluid being obstructed.

### PLATE III. THE CIRCULATING SYSTEM.

(Page 14.)

NO. 1. THE HEART: ITS AURICLES AND VENTRICLES. The Heart is here presented, detached from its location in the body. This organ is the seat of the circulation of blood. It is by the motion of this that the blood is sent throughout the whole

system. This consists of alternate contraction and dilation, called pulsation. By these alternate actions the blood is carried to the extreme parts of the body by the arteries, and returned by the veins. This action of alternate contraction and dilation, is probably the result of electric attraction and repulsion; by which the entire circulation is carried on.

The heart has two grand divisions, called right and left ventricles. They have sometimes been called two hearts. They are separated by a wall of flesh which is impervious. These two great divisions are divided again: each ventricle having a chamber divided off from its upper part, called right and left auricles. These four are the divisions of the heart. In this figure, *a* denotes the right auricle, *b* the left auricle, *c* the right ventricle, *d* the left ventricle.

The principal blood-vessels of the heart are, the great artery rising from the left ventricle, called aorta, which forms an arch, *e*, and then passes down in front of the spine, and divides into two branches —one for each lower limb. An artery also rises from the right ventricle, called pulmonary artery, *f*, which divides to each lung. The principal veins are, *g* and *h*, the great ascending and descending vein, called vena cava, and the pulmonary veins, which return the blood carried to the lungs by the pulmonary arteries, back to the heart again.

The course of the blood is this: the nutrition of the food, from which the blood is made, is taken up by the lacteals in the intestines, and deposited in the

thoracic duct, and is emptied into the vein which passes along the left arm-pit. Thence it is carried into the great vena cava, and emptied into the right auricle of the heart, thence into the right ventricle, through a valve, like that of a pump, which will not allow it to return. Thence this venous, or dark blood, passes through the pulmonary artery into the lungs on each side, where it gives off a portion of its carbon, and takes in oxygen from the air we breathe, changing its color to a bright red; then the blood is returned from the lungs by the pulmonary vein into the left auricle, and thence, by another valve, into the left ventricle, and thence sent throughout the system through the aorta which rises from this part.

When this blood has reached every part of the body through the arteries, and nourished it, then, having parted with its oxygen for the supply of all parts, it returns, through the veins, as venous blood, to the great vena cava, ascending from below the heart and descending from above the heart; and is emptied into the right auricle of that organ, from which it starts its round again. In this way, every two and a half minutes, the entire mass of blood passes its round throughout the whole circulation.

**No. 2. THE HEART AND LUNGS.** These organs are here shown in their connections. The figure shows the exact location of the heart in relation to each lung. The left lung is denoted by *a*; the right lung by *b*; the windpipe by *c*. The heart is denoted by *d*; the pulmonary artery by *e*; the great

descending vena cava by *f*; a part of the arch of the aorta by *g*.

PLATE IV. THE CIRCULATING SYSTEM.

(Page 16.)

No. 1. ARTERIES. This left-hand figure gives a general view of the large and small arteries. Beginning with the aorta where it is divided from the heart, we pass over its arch and follow it downwards till it divides for each lower limb. During its passage downwards it gives off various branches to supply different internal organs. The arteries of the arms and other parts are also exhibited. These arteries pass away into minute ramifications to supply every particle of flesh with blood. These ramifications meet with corresponding ramifications of veins, which are called capillaries. At the union of these, there are inconceivably small valves which prevent the blood propelled forward by the arteries, from returning after it enters the veins.

No. 2. VEINS. This represents the general view of the veins, by which the blood thrown out by the arteries, is carried back to the heart and lungs. At the lungs by the process of respiration, the blood, as already stated, meets the air, which modifies its character. At the surface, by the capillaries, the blood is also affected by contact with the atmosphere, through the skin.

In order for a healthy circulation of blood, the first thing to be done is the using of such food as is best adapted to make pure blood. While we create impure blood, it is useless to expect to cleanse that

vital fluid by any artificial means. The quadruped meats make blood far less pure than the bread-stuffs. This is especially true of the meats which we generally find in our markets; and more especially true of all swine's flesh. Scrofulous complaints, tubercles on the lungs, cancerous affections, diseased liver, and other glands, are abundantly produced by gross animal diet.

#### PLATE V. RESPIRATORY SYSTEM.

(Page 18.)

No. 1. THE LUNGS; RIGHT AND LEFT LOBES. The lungs are here presented, exhibiting simply their external appearance. The right lung has three divisions or lesser lobes; the left lung has only two. Their substance is of a spongy character, soft and elastic.

No. 2. THE LUNGS WITH THEIR BLOOD-VESSELS. This figure shows the connection between the spongy portion of the lungs, and its intermingling ramification of blood-vessels. Here are seen the minute branches of the right and left pulmonary arteries, distributing the blood to every part, to meet the air received into the air-cells in the process of breathing.

#### PLATE VI. RESPIRATORY SYSTEM.

(Page 20.)

No. 1. THE LUNGS AND THEIR AIR-CELLS. This figure gives the air-cells of the lungs. The trachea or wind-pipe first receives the air we breathe, which pipe divides into two tubes, called bronchial tubes, and these divide and sub-divide till they become lost in the little air-vessels here seen.

**NO. 2. THE LUNGS, AIR-CELLS, AND BLOOD-VESSELS.** This figure represents the air-cells in the lungs, as connected with their corresponding arteries and veins; the pulmonary arteries carrying the blood to exchange its gases with the air, in the air-cells, there giving off its carbon, and taking in from the air its oxygen, and then the pulmonary veins returning that renovated blood back to the heart and the general circulation.

**PLATE VII. DIGESTIVE SYSTEM.**

(Page 22.)

**THE STOMACH, LIVER, AND BOWELS.** This figure exhibits the principal organs concerned in the process of digestion. The liver is turned up, to give the better chance to observe the gall-bladder. The liver is *A, A, A*, and *B* the gall-bladder. The upper opening of the stomach is *L*; the stomach is *M*. The figure above gives a more distinct view of the stomach alone. In this principal figure are also presented the general course of the intestines, and the course which the food takes after it leaves the stomach for the nourishment of the system, and for the refuse to be carried off. In the small figure, the stomach alone, *A* shows the esophagus, or pipe leading from the mouth to its upper orifice; *B*, its lower orifice; *C*, the first intestine; *D*, the body of the stomach.

**PLATE VIII. DIGESTIVE SYSTEM.**

(Page 24.)

**THE SPLEEN, PANCREAS, AND BLADDER.** This figure presents organs more remotely connected with the digestive process. *L, L, L*, is the liver turned

upward; *G*, the gal-bladder; *P, P*, the pancreas; *S*, the spleen; *K, K*, the kidneys; *B*, the bladder. The great vein, *vena cava*, which returns the blood from the lower parts of the body up to the heart, can be distinctly seen passing up a little to the right of the spine; while on the left of it, the great artery, *aorta*, is seen passing down, conveying the blood from the heart to the lower parts of the body.

#### PLATE IX. THE MUSCULAR SYSTEM.

(Page 54.)

THE FRONT SECTION OF MUSCLES. This plate presents a front view, of the muscular system. The skin and fatty substances being removed, the muscular fibres can distinctly be seen running in different directions. The bony system is only the frame-work of the man; the muscular is the inside covering, and in a large degree the filling up of that frame-work. In the bony system alone there is no motive power; the will cannot act directly on the bones; the muscular system is the only immediate agency through which the mind can control their movements. The mind acts through the nerves on the muscles, causing them to contract, and thereby directs the action of the bony frame.

These muscles are attached in their origin to some substantial fastening of bone, and then extend to some other point in the bony system to be fastened by insertion. Thus the Sartorius, or tailor's muscle, the longest muscle in the body, is arranged. It has its origin, or first fastening, in the bone of the hip. It then passes over in front of the thigh, gradually

inclining inward as it passes down on the inside of the knee, to be inserted into the bone of the leg on its inside. This muscle aids in bending the thigh ; it rolls the hip-joint, and lifts one leg over the other as tailors sit.

#### PLATE X. THE MUSCULAR SYSTEM.

(Page 56.)

THE BACK SECTION OF MUSCLES. This plate presents a back view of the muscular system ; showing the origin of various muscles, which attach their fibres in and about the back, and extend to their different insertions, according to the object for which they are intended.

These plates give a general idea of the muscles and fibres of muscles, throughout the external parts of the body ; the internal muscles are not attempted. It is not expected that a minute idea of these muscles, or their names, can here be obtained ; it is intended only to give a general knowledge of the subject, for general, practical purposes.

The two skeletons on this and plate IX. are intended to exhibit a front and a back view of the bony frame of which the body is composed ; and also some idea of the depth of the muscles which is required to cover them.

#### REMARKS.

A word may be due here, on the formation of muscular fibre. Substances which contain azote, or nitrogen, are indispensable in the food for the creation and support of muscular strength. It is important to know something of the proportion of this

element contained in the different articles used for food. It may be due here to say, also, that substances containing carbon are essential to the producing of heat, and therefore as essential to life as those which produce only muscular fibre.

The grains contain carbon, the basis of starch, much more largely than the flesh of animals. They also abound in gluten, which contains nitrogen for the formation of muscular fibre. This is true especially of wheat. Hear what Dr. Carpenter, in his *Principles of Human Physiology*, says on this point.

"The mixture of azotized and non-azotized compounds, gluten and starch, that exists in wheat flour, seems to be just that which is most useful to man; and hence we see the explanation of the fact, that from very early ages bread has been regarded as the 'staff of life.' "

Liebig, in his *Animal Chemistry*, says: "Chemical researches have shown, that all such parts of vegetables as can afford nutriment to animals, contain certain constituents which are rich in nitrogen." These azotized or nitrogenized forms of nutriment found in the vegetable kingdom, he reduces to three elementary substances, namely, vegetable Fibrine, vegetable Albumen, and vegetable Caseine. All these abound in the bread-stuffs, especially the wheat.

The amount of nutrition which we obtain from food depends not alone on the particular kind we take, or on the quantity, but on the proportion of nutriment which belongs to the nature of the article

The following table, made out from the highest European authorities, will show the proportion of nutrient properties belonging to different articles used in ordinary diet. The figures against each article show the amount of nutrition which each contains in every one hundred parts.

VEGETABLE FOOD.		ANIMAL FOOD.	
Wheat, about . . . . .	85	Beef, about . . . . .	25
Barley, " . . . . .	83	Ceal, " . . . . .	25
Rye, " . . . . .	83	Mutton, " . . . . .	25
Oats, " . . . . .	79	Lamb, " . . . . .	25
Oatmeal, " . . . . .	93	Chickens, " . . . . .	22
Rice, " . . . . .	90	Codfish, " . . . . .	20
Peas, " . . . . .	93	Oysters, " . . . . .	13
Beans, " . . . . .	92	White of Eggs, . . . . .	20
Potatoes, " . . . . .	25	Yolk of Eggs, . . . . .	46

The readiness with which different articles can be digested, has to do in some degree with the readiness with which life can be sustained by them. The following table will show the length of time required in the digestion of different articles, as shown by experiments made by Dr. Beaumont on Alexis St. Martin, whose stomach was exposed by a gun-shot wound. The figures against each article show the hours and minutes required for the stomach to perform its portion of the digestive process. This is as far as the experiment with St. Martin could go; the rest of the process of digestion, requiring more or less time, consists in the formation of chyle in the Duodenum, or second stomach, and its absorption by the lacteals. But the difference of time required for the whole process of digestion of different articles, is doubtless chiefly confined to the stomach.

## VEGETABLE FOOD.

Apples, sour, mellow, . . . . .	2.—	Beef, lean, fresh, rare, roasted, . . . . .	3.—
Apples, sweet, mellow, . . . . .	1.30	Beefsteak, broiled, . . . . .	3.—
Beans, boiled, . . . . .	2.30	Beef, salted, . . . . .	3.36
Bread, wheat, . . . . .	3.30	Beef, fresh, lean, fried, . . . . .	4.—
Bread, corn, . . . . .	3.15	Beef, corned, boiled, . . . . .	4.15
Corn cake, baked, . . . . .	3.—	Codfish, cured, boiled, . . . . .	2.—
Apple dumpling, . . . . .	3.—	Chicken, fricasseed, . . . . .	2.45
Potatoes, Irish, boiled, . . . . .	3.30	Duck, domesticated, roasted, . . . . .	4.—
Potatoes, Irish, baked, . . . . .	2.30	Duck, wild, roasted, . . . . .	4.30
Rice, boiled, . . . . .	1.—	Eggs, boiled, hard, . . . . .	3.30
Sago, boiled, . . . . .	1.45	Eggs, boiled, soft, . . . . .	3. —
Tapioca, boiled, . . . . .	2.—	Mutton, fresh, roasted, . . . . .	3.15
Parsnips, boiled, . . . . .	2.30	Oysters, raw, . . . . .	2.55
Cabbage, raw, . . . . .	2.30	Oysters, stewed, . . . . .	3.30
Cabbage, boiled, . . . . .	4.30	Pork, fat and lean, . . . . .	5.15
Milk, raw, . . . . .	2.15	Veal, fresh, boiled, . . . . .	4.—
Cheese, raw, . . . . .	3.30	Veal, fresh, fried, . . . . .	4.30

## ANIMAL FOOD.

The table here introduced is an abstract from that of Dr. Beaumont; it was not deemed necessary in this case to give it entire. It is classified into articles of vegetable and animal food. The articles milk and cheese are put under the head of vegetable food, because they are extracted directly from the vegetable kingdom, and have never become animal flesh, and vitalized with the electric currents of animal life.

By comparing the average of time required for forming chyme, it will be seen that a little more time is required for animal substances than vegetable; that soups require a longer time than more solid articles. They are generally greasy substances, which, when introduced into the stomach, cannot as well be grappled with, and intermixed with the gastric juice, as other and more solid substances. For this reason melted butter should not be introduced into the stomach.

The following table, containing a few leading articles, shows the proportion, to each one hundred parts, of Azote, the flesh-forming principle, of Carbon, the heat-forming principle, and of Alkali for the formation of bone, contained in each article.

100 PARTS.	AZOTE.	CARBON.	ALKALL.
Wheat, about	21	62	2
Barley, "	14	68	2
Oats, "	11	68	3
Beans, "	31	52	3
Peas, "	29	52	3
Potatoes, "	2	22	1
Beef, Veal, Mutton,	25		

The lean meats contain no considerable amount of carbon or alkali; they abound only in azote, the basis of fibrine. The fat of meats abounds in carbon. The breadstuffs and some other vegetables, abound in both principles, and contain them much more largely than the meats.

The objection to quadruped animal flesh consists mainly in its stimulating properties; which tend to inflame the blood, oppress mental activity, and enhance the grosser animal passions. This stimulus depends, probably, on the electricity which abides in the flesh after its vitality becomes extinct. It is electricity which keeps the constituent elements of the flesh in union; as electricity departs, these elements gradually lose their attraction for each other, and entire dissolution is the final result.

In taking the meats, we take into the system the electric properties of dead animal flesh. These electric properties are not pure, like those of pure atmosphere; but consist of electricity recently the agent

of their animal nature and developments, which still retains its animalizing agencies; which, being received into the system, becomes incorporated with, and a part of our own nature. How much better, then, that we content ourselves with that bread which from the beginning has been correctly denominated the "Staff of Life"!

#### PLATE XI. THE FORMS OF TEETH.

(Page 64.)

No 1. HUMAN TEETH. This figure exhibits the teeth made bare by removing the integuments of the face and lips. The object simply is to show that man cannot be properly classified, according to any indications from his teeth, as a carnivorous, or flesh-eating animal. His teeth, comparatively, are short and broad, for masticating fruits and farinaceous aliment; instead of being long and sharp-pointed, for tearing the flesh of his fellow-beings.

No. 2. THE COW'S TEETH. The character of these teeth are closely allied to that of human teeth. The cow was not made for devouring animal flesh for her subsistence; yet, unnatural as it is, she can be trained into that habit of living till she feels, like many human beings who have adopted the same course, that she cannot dispense with it.

If there is any force in arguments, drawn from any indications pertaining to the teeth, as to what man shall eat, the proof is decidedly, as seen in this and the next plate, against his eating flesh.

## PLATE XII. THE FORM OF THE TEETH.

(Page 66.)

**No. 1. TEETH OF THE BABOON.** Here is another fruit-eating animal, whose teeth certainly furnish no stronger proof of his being a vegetable-eating animal than those belonging to the human mouth. When his teeth are compared with those of the following tiger, there will be found a strongly-marked distinction.

**No. 2. TEETH OF ORANG-OUTANG.** The teeth of this animal, which closely approximates the human species, are less closely allied to the human teeth than those of the cow; yet, instead of being naturally an omnivorous animal, whose food is compounded of animal and vegetable, he is decidedly and entirely a fruit-eating animal.

**No. 3. TEETH OF THE TIGER.** Here are presented the teeth of another class of animals,—the carnivorous or flesh-eating animals. The front teeth are long and sharp-pointed, adapted to grasp and tear the flesh of its fellow-animals. The tiger lives on flesh alone. Compared with his, the teeth of the baboon or orang-outang would be less unlike them than those of the human species. Hence, man would be the last of the three to be suspected of a nature adapted to even a mixed diet of animal and vegetable food.

## PLATE XIII. POSITION OF THE CHEST.

(Page 188.)

No. 1. SITTING POSTURE. In this figure is described the general sitting posture, right and wrong. Here are two school-boys: one erect in a chair, the other crouching on a high stool. These figures not only describe the position of boys, but also girls. They also not only describe the posture, good and bad, of pupils in the schools, but the posture of the world, while sitting in their various callings in life.

There is too little care taken about the arrangement of seats in school-rooms. If they are so high that the flat feet cannot rest on the floor, they are inconvenient for sitting in a right position. They should have backs, reaching up nearly to the shoulder-blades. Without this arrangement, the back grows weary of supporting itself, and there follows an inclination to let the spine curve over the lungs; pressing them downward, and thereby pressing down also the whole contents of the chest and abdomen.

The boy on the left of the reader is giving his chest space for full play of the lungs in the process of breathing; a very important matter, not only for his bodily developments, but also for the action of the mental energies. The boy on the right is adopting the opposite course.

No. 2. SITTING AT TABLE. Here is represented two lads at a table, writing: the one occupying a right position, and the other a wrong position. Per-

sons accustomed to writing are extremely apt to oppress and cripple their chest. This prevents the full volume of air being received into the lungs, which is essential to the right performance of respiration. There is consequently insufficient oxygen taken into the circulation of blood, and insufficient opportunity for the venous blood to throw off the surplus of carbon which it contains.

By this unnatural pressure, the proper exchange of these gases is not only impeded, but the air-cells of the lungs are pressed together and irritated. Then chronic or acute inflammation often sets in, producing cough, which perhaps ends in ulceration and death by consumption. And, while this irritation and cough are coming on, other adjacent organs, the heart and liver and stomach, are often affected; both by pressure which comes directly on their nearest neighbors, the lobes of the lungs, and indirectly on themselves, and also by direct sympathy with those organs. The diaphragm becomes also pushed out of its proper locality, and the right performance of its appropriate functions.

#### PLATE XIV. POSITION OF THE BODY.

(Page 190.)

**No. 1. THE STANDING POSTURE.** The positions, good and bad, while standing, are here seen. The figures may be supposed to represent two clergymen, with books in hand, giving out and reading the hymn for the choir in church. The one on the right of the reader stands erect, as though he felt that the

best position for his body is that in which the Creator originally made him; as though he wished to give full chance for the exercise of lungs and voice in spreading gospel light; as though he did not think too highly of himself, but soberly, according as God had given to him his measure of grace, and as though he had also a clear conscience in an upright soul, which needs an upright body for its present tabernacle.

The figure on the reader's left seems to present one whose stinted breathing has been of such long standing as to give to his whole body and spirit that excessive meekness which grows out of physical and vital imbecility. The meekness of his posture is but an index to the meekness of his moral courage. He seems to indulge justifiable doubts as to the practicability of his ever accomplishing much in the world, or of leaving any strong marks in proof of his ever having lived in it. His vocal pipes are curved out of their right line; his lungs have sunk away into comparative insignificance, and the whole contents of the abdomen seem to have fallen asleep in the basement story of their dwelling.

No. 2. THE RIGHT FORM OF CHEST. This figure simply shows the compass of the chest by front view, which the lungs occupy. We can easily see by this the impossibility of letting the chest fall in, without doing violence to its external framework and all its contents. The front bone in this figure is called the sternum. The ribs are attached backward to the spine or back-bone, and forward to the sternum by

firm cartilages. When the sternum or front-bone is pressed in by bending over, the whole company of ribs are also pressed out of place.

The whole trunk should be kept habitually so erect, that the perpendicular measure of the body from the centre of the neck downward should be the same, whether the line be placed in front of the body or upon the back. This erect position is of great importance in relation to the vocal organs in singing or speaking. A great many throat complaints in public speakers have been caused by the vocal avenues being bent out of natural shape by stooping over to read. The air being forced through these crooked pipes, has produced on their lining membranes chronic inflammation. The bronchial membranes, further down the chest, have also been injured in the same way.

#### PLATE XV. TIGHT LACING.

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No. 1. ON THE EXTERNAL FORM. The external form is greatly distorted by the fashion of binding the lower part of the chest with corded stays. Though the severity of this fashion has subsided in a large degree, still there is great fault justly to be found in the tightness of the present dresses. Many a female has ruined herself for this life by trying to improve the works of Deity in her form.

In the figure on the reader's left, is exhibited the unnatural form produced by lacing. The lower part of the lobes of the lungs, which need the most room for expansion in breathing, have the least chance for

it. And not only the lungs, but the liver, and diaphragm, and stomach, and heart, and pancreas, all of which organs lie in the regions of the distorted part, are more or less affected by this abuse.

The figure on the reader's right represents one who wears easy dresses, which cannot distort nature's taste in the formation of the body. Though its form may not so well suit the fancy of one whose brains might be put into a very small space without being compressed, yet to every sensible mind, and the mind of Deity, it would be considered far preferable.

No. 2. ON THE INTERNAL FORM. This shows the effect of lacing upon the internal framework of the chest. The left figure shows the spine, and ribs, and sternum, in their natural and healthy proportions. The lower ribs are undisturbed, having all their native elasticity for the purpose of giving expansion to the lower portions of the lungs, and room also for other organs in the same region.

The right figure shows the compressed and distorted ribs, where the lower part of the lungs have no freedom of action, and the breathing is forced up into upper portions of the lungs, where comparatively little chance for expansion can be had.

The spine often suffers from the compression of the chest. The spinal column has no natural elasticity for forming curves, except forward and backward; all side-wise curvatures are, therefore, necessarily unnatural and diseased. These side-wise distortions are often produced, directly or indirectly, by these compressures about the chest.

## REMARKS.

From the foregoing plates which have here been described, it can very easily be seen what must be the inevitable consequences of wrong habits of eating and drinking, and other wrong indulgences of appetites. If we use wrong nourishment,—articles which, though they contain nutriment, also contain other qualities that are injurious,—we can see how extensively those hurtful influences are scattered into every part of the system.

The general influences of quadruped meats, in depraving the circulating fluids and vitiating the flesh, are distributed in every minute part of the system by every pulsation of the heart. The blood which contains that morbid matter reaches its extreme points of destination throughout the system, in less than two minutes after it leaves the heart. In this way particle after particle is deposited in the flesh of the whole body.

This is true, also, of all other morbid matter which enters the circulation. The poisonous bite of the rattlesnake, or of a rabid animal, is in this way, by gradual deposits, lodged finally upon the most vital organs. In this way, too, the juices of tobacco enter the whole circulating system, and become lodged in all the substance which composes the body. In like manner all poisonous drugs and drinks which enter the stomach, work their way and saturate the entire flesh.

There is a somewhat popular idea in the minds of the less intelligent, that some degree of poison is

essential to life; that all our food has more or less poison in it. But the idea is very wide from the truth. In the pure breadstuffs there is not a particle of poison while in their natural state. For instance, there is no alcohol in the rye or potato while the elements which compose it remain in their present condition. A chemical change must take place before alcohol can exist. Suppose we take sugar, from which alcohol is formed by fermentation, and put it into a fermenting state.

The sugar is now composed of three fundamental elements, Oxygen, Hydrogen, and Carbon : each one hundred pounds of sugar, contains about thirty-nine pounds of carbon, seven of hydrogen, and fifty-four of oxygen. In this combination, nutrition largely abounds. But fermentation, a part of the oxygen and carbon are thrown off together in the form of carbonic acid gas ; the hydrogen remains. When the process is completed, one third of its carbon has departed, and two thirds of its oxygen. The hydrogen now bears a different relation to the oxygen and carbon than before, making a new article, containing an undue proportion of hydrogen, which is one of the most inflammable gases in the world.

Let those know, who indulge in alcoholic drinks, or any other false, sensual and exciting luxury, that they are receiving an article into the whole flesh and fluids of the body which inflames the whole circulation of fluids, corrupts the flesh, and tends to prostrate the native energies of the soul.